

FSA Integration Partner

United States Department of Education

Federal Student Aid



**Data Strategy Enterprise-Wide
Routing ID Team
123.1.25 RID High-Level Design**

Task Order #123

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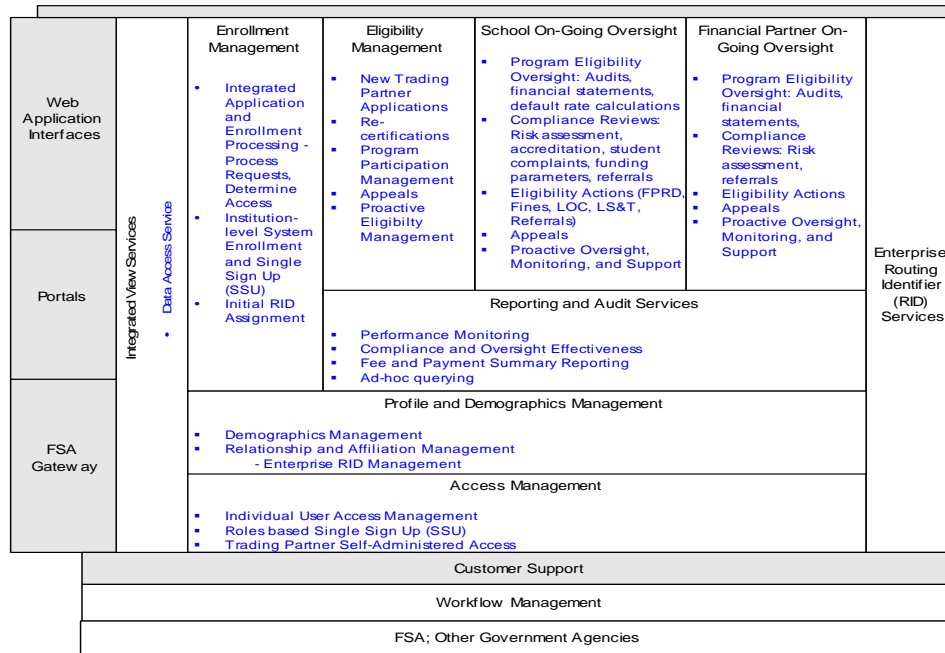
Executive Summary

Introduction

Customarily, new FSA systems have used unique, application-specific identification methods to internally define and manage Trading Partners (i.e., Schools, School Servicers, Lenders, Lender Servicers, Guaranty Agencies, Private Collection Agencies, State Agencies, Federal Agencies, Auditors, and Owners). This has resulted in an inconsistent method with which to identify Trading Partners across the FSA enterprise. Currently, Trading Partners are required to identify themselves to FSA using different identifiers depending on the business process or system with which they are communicating. In light of this, a clear need exists for a solution that will create a single, unique identifier for all FSA Trading Partners. To address this need, a new Routing ID (RID) will be implemented. The RID will create a single, enterprise-wide, common identifier for every Trading Partner regardless of Trading Partner affiliation, ownership structure, or type of interaction with FSA.

The concept of the RID is not new to FSA. Much preliminary thought has been invested into the concept. As a result of this initial work, the Common School ID (CSID) has been implemented within the Common Origination and Disbursement (COD) system. The CSID is an eight-digit common identifier assigned to all Schools within COD. This current RID initiative plans to take the work that was done by COD and raise it to the enterprise level. This initiative is comprised of two major phases including an Implementation Options Analysis phase and a High-Level Design phase.

The first phase of this RID initiative, which concluded on July 1, 2003, included an evaluation of seven potential options for implementing the RID functionality into the FSA enterprise. During this evaluation it became clear that the recommended option for implementing the RID functionality into the FSA enterprise is via a Trading Partner Management (TPM) Based Solution. TPM is envisioned as a comprehensive solution that will enable FSA to gain a holistic view of its Trading Partners across the enterprise. While the RID functionality will serve as the backbone of TPM by providing Trading Partners a means to interact with FSA systems and services using a single common identifier across the enterprise, there are additional functions and processes that will comprise TPM as illustrated in the following figure.



FSA Trading Partner Management (TPM) Framework

The second phase of the current RID initiative involves the creation of a High-Level Design for the recommended implementation option. This document addresses the High-Level Design and provides information around the high-level functional requirements, the high-level data model, and the high-level processes of the RID component of TPM. In addition, this document covers how the RID component of TPM will support Change of Affiliation, Effective Dating, and Data Access. Furthermore, this document provides a high-level view of how the RID component will be integrated into the FSA enterprise and what effects this integration will have on internal FSA systems and external Trading Partners.

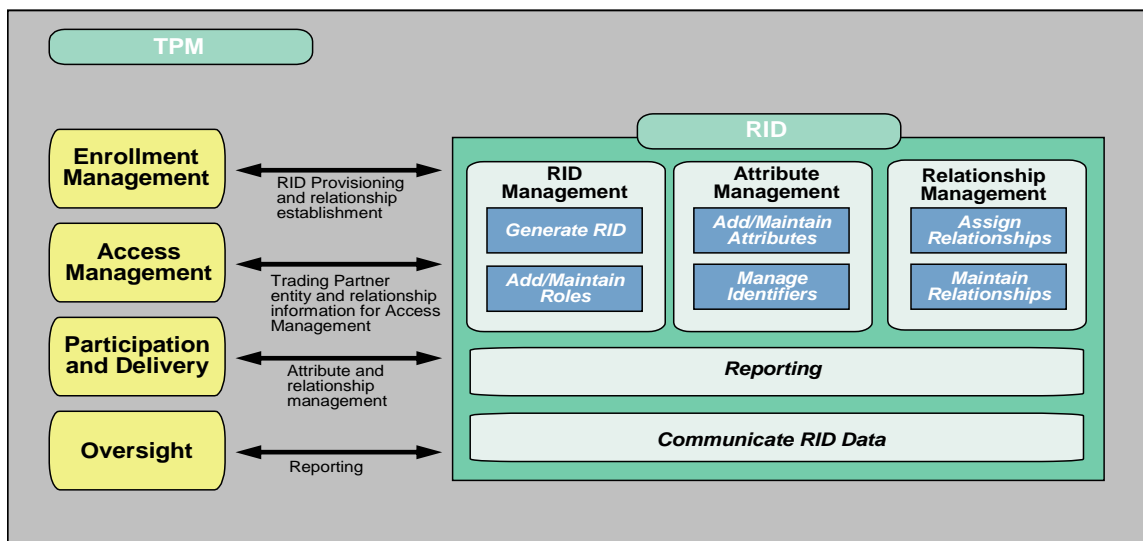
The High-Level Design outlined in this document directly addresses the Schools portion of Performance Plan Action Item 16.2.2: “Develop requirements and initial design for Common Identifiers for Schools, Students.” The Students portion was addressed within the Common Student ID (CSID), other wise known as the Standard Student Identification Method (SSIM), High-Level Design (Deliverable 123.1.22).

An iterative approach was utilized in outlining, developing, and refining the various portions of this High-Level Design for the RID component. Initial drafts of the various sections were created using information gathered from relevant discussions during previous RID phases, incorporating information gathered from FSA Subject Matter Experts (SMEs) during this phase of the RID initiative, and utilizing information identified by internal team members. These drafts were then shared with the RID Core Team during the various Core Team meetings and Working Sessions that were held. Any comments, suggestions and/or updates made during these meetings/working sessions were noted, researched further as needed, and incorporated into the High-Level Design for the RID component as appropriate.



High-Level Functional Requirements

The following figure illustrates the functional vision of the RID component, highlighting its capabilities and external relationships.



Functional Areas of RID Component

As can be seen from this figure the RID component has five primary functional areas including, RID Management, Attribute Management, Relationship Management, Reporting, and Communicate RID Data. These five functional areas serve as a major source of the high-level functional requirements that the RID component must fulfill in order to be successful.

Additional requirements were collected in areas such as general requirements, initial load and start up requirements and user interface requirements. In all there are seven categories of requirements for the RID component. These seven categories are as follows:

- General Requirements
- Initial Load & Start Up Requirements
- Add New/Modify Existing Trading Partner Requirements
- Assign & Maintain Trading Partner Requirements
- Communicate RID Data Requirements
- User Interface Requirements
- Generate Reports Requirements

RID Component Overview

The RID component will be responsible for generating and/or assigning RIDs for all Trading Partners directly interacting with FSA and tracking the relationships these Trading Partners have with one another. As mentioned previously, the Trading Partners currently identified include, Schools, School Servicers, Lenders, Lender Servicers, Guaranty Agencies (GAs), Private Collection Agencies (PCAs), State Agencies, Federal Agencies, Auditors, and Owners. The RID



will be an eight-digit randomly generated non-intelligent number that will convey nothing about a Trading Partner aside from its identity.

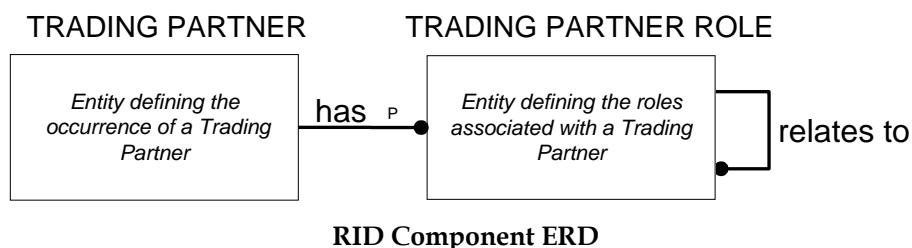
Trading Partner entities will be comprised of the various roles they perform (i.e., School, School Servicer, Lender, Lender Servicer, Guarantor, Guarantor Servicer, etc.). Each Trading Partner entity will be assigned a single RID no matter how many different roles they may perform. For example, if a School is also a School Servicer the School and the School Servicer will be considered one Trading Partner entity that will receive a single RID that contains two distinct roles.

Each Trading Partner role type will have corresponding legacy identifiers. These legacy identifiers will be tracked by the RID component within a Legacy Identifier Crosswalk. This crosswalk will facilitate communication among systems internal to the FSA enterprise as well as communication between external Trading Partners and FSA. The RID component will continue translating RIDs to legacy identifiers and vice versa until all internal and external communication is done using only the RID.

Tracking relationships between Trading Partners is one of the most vital roles that the RID component will play. Trading Partner relationships will be tracked at the role level rather than at the actual Trading Partner level.

High-Level Logical Data Model

The high-level entity relationship diagram (ERD) for the RID component contains two entities: TRADING PARTNER and TRADING PARTNER ROLE. The TRADING PARTNER entity defines the FSA Trading Partner, or business entity that is conducting business or exchanging information with FSA. The TRADING PARTNER ROLE entity defines the roles that an FSA Trading Partner may perform. This ERD is illustrated in following figure.



The above figure may be read as follows:

- An instance of a Trading Partner **has** one, or more Trading Partner Role(s)
- Each Trading Partner Role **relates to** zero, one or more Trading Partner Role(s)

Building the conceptual ERD in a high-level logical data model requires the definition of the entities supporting the ERD and their associated attributes. For more information about the ERD please refer to Section 4.3 – Model Overview and Features. Further the logical data model contains the set of entities and attributes necessary to support the defined high-level functional



requirements for the RID component. The high-level logical data model for the RID component is comprised of seven entities in total. These seven entities are as follows:

- TRADING PARTNER
- TRADING PARTNER ROLE
- TRADING PARTNER ROLE TYPE
- TRADING PARTNER LEGACY IDENTIFIER
- TRADING PARTNER LEGACY IDENTIFIER TYPE
- TRADING PARTNER RELATIONSHIP
- TRADING PARTNER RELATIONSHIP TYPE

This high-level logical data model was developed for flexibility to support the evolution of FSA business processes and the changing higher education environment and partner landscape. In addition to flexibility, the model has additional benefits including simplicity, data drive, effective dating, and accommodation of legacy identifiers.

High-Level Processes

There are seven core processes involved in the procedure for populating and maintaining the RID component logical data model. The seven core processes are as follows:

- Receive Request from New or Existing Trading Partner
- Generate and Assign Routing ID
- Add Trading Partner Role(s)
- Add Trading Partner Legacy Identifier(s)
- Assign Trading Partner Relationship(s)
- Modify Existing Trading Partner
- Modify Existing Trading Partner Relationship(s)

These processes illustrate the steps involved in creating, assigning and maintaining Trading Partner information through the RID as organized in the high-level logical data model.

Support Change of Affiliation

The RID will provide a fixed reference point to a Trading Partner, regardless of its affiliation to other entities. This fixed reference point will provide business owners a clearer understanding of the impacts Change of Affiliation may have on their processes. RID will help manage Change of Affiliation issues by tying the identifier to each Trading Partner entity rather than to a specific location. The implementation of the RID component, however, is not a business process change, but rather a tool that will help address current anomalies within existing business processes. Separate re-engineering/re-examination efforts for some business processes will be necessary to explore complete resolution of Change of Affiliation issues.



Support of Effective Dating

The ability to maintain an accurate history of modifications made to entities within the solution is a critical feature of the RID component. This functionality is generally referred to as effective dating. The dates most salient to the RID, the start dates and end dates, will be captured accurately and meaningfully throughout the lifetime of a Trading Partner in the FSA enterprise. These dates will enable a picture of how a particular Trading Partner appeared at a specific point in time or over a specific period of time.

Support of Data Access

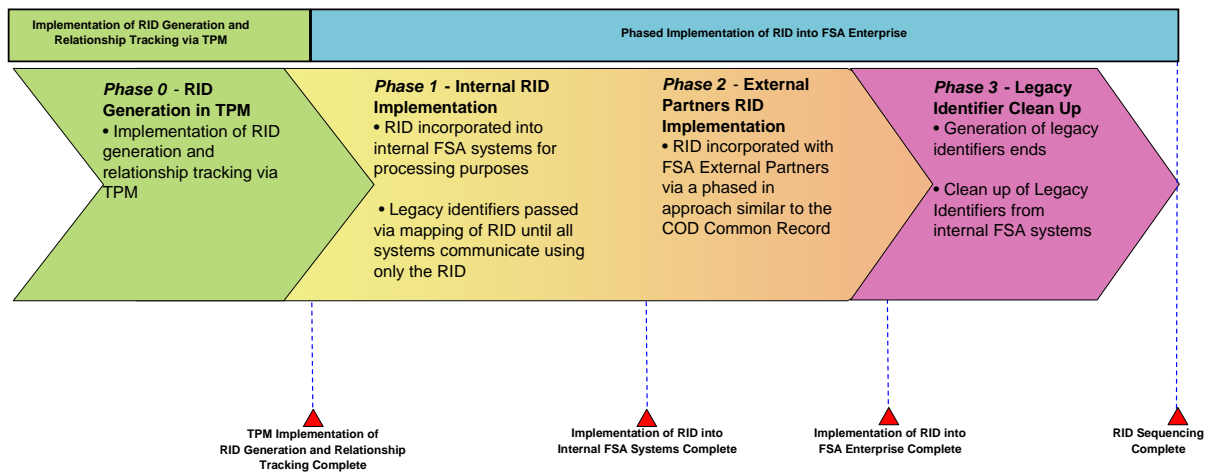
The RID component will include a user interface that enables FSA approved staff members to conduct ad hoc queries related to specific Trading Partners or groups of Trading Partners. These queries could be as simple as determining all of the relationships related to a particular Trading Partner role or potentially as complex as determining the cohort default rates for all campuses within the City University of New York (CUNY) system. Due to the use of effective dating within the RID component, queries on timeframes in the past will be possible.

RID Component Integration & High-Level Sequencing Approach

The RID component is a portion of the Trading Partner Management (TPM) Business Capability area within the target state vision for the FSA enterprise. Once developed, the RID component will need to be integrated into the FSA enterprise.

The first step in this process should include a data clean up effort to eliminate discrepancies between legacy identifiers stored within existing legacy systems. Once the data is clean an initial data load will need to occur. The initial data load will involve adding the existing Common School IDs generated by COD as RIDs with a role of School as the default and adding the existing LIDs generated by FMS as RIDs or generating new RIDs for the existing LIDs, depending on which option is selected for Lenders (for more information on the various options, please refer to Section 11.3.2 – Lenders), with the appropriate role of Lender or Lender Servicer. All corresponding synchronized legacy identifiers will be added to each role. In addition, all existing known relationships between the various roles will be established. This will include both business and grouping relationships. The initial data load process will also generate RIDs and add roles, legacy identifiers, and relationships for all existing Trading Partners who do not already have a RID.

Once the data is clean and the initial data load is complete, the RID will need to be gradually phased into the internal FSA environment and adopted by the external Trading Partners. Additionally, the generation of specific legacy identifiers will need to cease and legacy identifiers will need to be cleaned up from existing legacy systems. One way to accomplish all of this is through a series of phases as depicted in the following figure.



RID High-Level Sequencing Approach

High-Level Testing Strategy & Scope

The testing strategy and testing scope outlined primarily support the activities required to test and obtain acceptance for the RID component of TPM. It is recommended that the same logic be carried forward into the definition of the testing strategy and testing scope for TPM in its entirety. Additionally, the testing strategy and the testing scope for the RID component will need to be more fully detailed during the Detailed Design phase of the RID component.

RID testing should include, but not be limited to, testing the following business processes and reports. Additional business processes, reports, and other areas for testing will likely be identified during the Detailed Design phase of the RID component.

- **Business Processes**
 - Data Synchronization & Initial Data Load
 - Add New Trading Partner
 - Modify Existing Trading Partner
 - Change of Affiliation
- **Reports**
 - Audit Reports
 - Error Reports

High-Level Risk Analysis & Impact Assessment

Inherent with the implementation of new functionality into the FSA enterprise is the potential for encountering various financial, technical, functional, scope, management, and exposure risks. Examples of the potential risks run from challenges to clean, synchronize, and convert the existing legacy system data to a new database of all Trading Partner related data (i.e., the Common Data Architecture) to the fact that the number of on-going projects could over extend FSA resources. Such risks have been identified and appropriate mitigation strategies outlined.



All business capability areas within the future FSA enterprise as defined during the various Data Strategy retreats are expected to utilize the RID as the key identifier for Trading Partners. This being the case, internal FSA systems and external Trading Partners will need to make certain adjustments to accommodate for the RID. The impacts of these adjustments have been identified in both the internal FSA enterprise and the external Trading Partner environment.

Next Steps

The RID component is only one portion of the greater TPM Solution. Several of the other portions comprising the TPM Solution will be addressed by the Trading Partner Management System (TPMS) Requirements Gap Analysis (Task Order 147). This gap analysis will address these aspects that have yet to be addressed as well as determine if anything is missing from the TPM Framework. This effort will include re-examining the RID component and the information included within this document. The end result of this analysis effort will be a set of requirements for the TPM Solution.



Amendment History

DATE	SECTION/ PAGE	DESCRIPTION	REQUESTED BY	MADE BY
11/14/03	All	Document submitted for FSA-wide review	N/A	W. Hoffman
11/17/03	11.2.3, 11.3.2	Relocated section dealing with changes to the CommonLine (FFEL Loan) Identifier from the CSB to the Lender section.	Allen Prodggers	H. Burrs
11/17/03	Various	Incorporated a variety of changes to facilitate readability.	Ted Taverner	H. Burrs
11/25/03	1.4.2	Clarified the functionality included under the TPM Business Capability area within the FSA Target State including eCB.	J. Long	W. Hoffman
11/25/03	1.4.4	Clarified the type of DUNS Number (i.e., both Grantee and Payee) that will not be retired.	J. Long	H. Burrs
11/25/03	9.1.2.6	Corrected information about the GA ID in PEPS and added information about the two-digit region code for GAs.	N. Harding	H. Burrs
11/25/03	9.1.2.12	Added that the Taxpayer Identification Number is also known as the Employer Identification Number (EIN).	F. Ramos	H. Burrs
11/25/03	9.1.2.13	Added GAPS Sequence Number to this section (previously just GAPS Award Number)	J. Long	H. Burrs
11/25/03	11.2.5	Added information about the FMS interface with FMSS for Partner Payment Processing.	F. Ramos	H. Burrs



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1 Introduction

1.1 Background

Historically, new FSA systems have defined unique, application specific identification methods to internally define and manage Trading Partners (i.e., Schools, guaranty agencies, Lenders, Servicers, State Agencies, and Private Collection Agencies). Further complicating the landscape, identifiers from entities outside FSA such as the Data Universal Numbering Scheme (DUNS), Taxpayer Identification Number (TIN), and the Integrated Post Secondary Education Data System (IPEDS) number are used to support specific business processes in the delivery of Title IV Aid. This has resulted in a lack of a consistent manner with which to identify Trading Partners across the FSA enterprise. Trading Partners are currently required to identify themselves to FSA using different identifiers depending on the business process or system with which they are communicating.¹

The use of these various identifiers as well as the issues around maintaining an accurate history of Trading Partners when they change their appearance from FSA's perspective (i.e., undergo a Change of Affiliation) hinder FSA's ability to efficiently gather comprehensive data about a particular Trading Partner or group of Trading Partners. This directly affects the decision-making critical to FSA's core mission and affects FSA's ability to respond quickly to inquiries about Trading Partners. Further, the multiple manners in which a single entity is identified within FSA business processes is a factor that contributes to data quality issues with discrepancies in identifiers resulting in potentially reduced customer service levels.

Taking all of this into consideration, there is a credible need for a solution that will create a single, unique identifier for all of FSA Trading Partners. To address this need, a new Routing ID (RID) will be implemented. The RID will create a single, enterprise-wide, common identifier for every Trading Partner regardless of Trading Partner affiliation, ownership structure, or type of interaction with FSA.

The concept of the RID is not new to FSA. Much preliminary thought has been invested into the concept. As a result of this initial work, the Common School ID (CSID) has been implemented within the Common Origination and Disbursement (COD) system. The CSID is an eight-digit common identifier assigned to all Schools within COD. This current RID initiative plans to take the work that was done by COD and raise it to the enterprise level. This initiative is comprised of two major phases including an Implementation Options Analysis phase and a High-Level Design phase.

The first phase, which concluded on July 1, 2003, consisted of business objective and high-level requirements gathering as well as identifying and evaluating potential implementation options for the RID functionality. The end result of this phase was the creation of the Routing ID (RID)

¹ An overview of the flow of current Trading Partner identifiers throughout the Financial Aid Lifecycle is located in Appendix B: Overview of Current Identifiers in the Financial Aid Lifecycle.



Implementation Options Analysis (Deliverable 123.1.24). This deliverable contained the evaluation of seven potential options for implementing the RID functionality into the FSA enterprise, including:

- Common Origination and Disbursement (COD) Based Solution
- Stand-alone Solution
- Trading Partner Management (TPM) Based Solution
- Two Phased TPM Based Solution
- Stand-alone Enrollment and Access Management Based Solution
- Participation Management Based Solution
- Maintain Status Quo

As this evaluation was conducted it became clear that the recommended option for implementing the RID functionality into the FSA enterprise is via a Trading Partner Management (TPM) Based Solution. TPM is envisioned as a comprehensive solution that will enable FSA to gain a holistic view of its Trading Partners across the enterprise. While the RID functionality will serve as the backbone of TPM by providing Trading Partners a means to interact with FSA systems and services using a single common identifier across the enterprise, there are additional functions and processes that will comprise TPM. The following figure illustrates the proposed overall FSA TPM Framework.

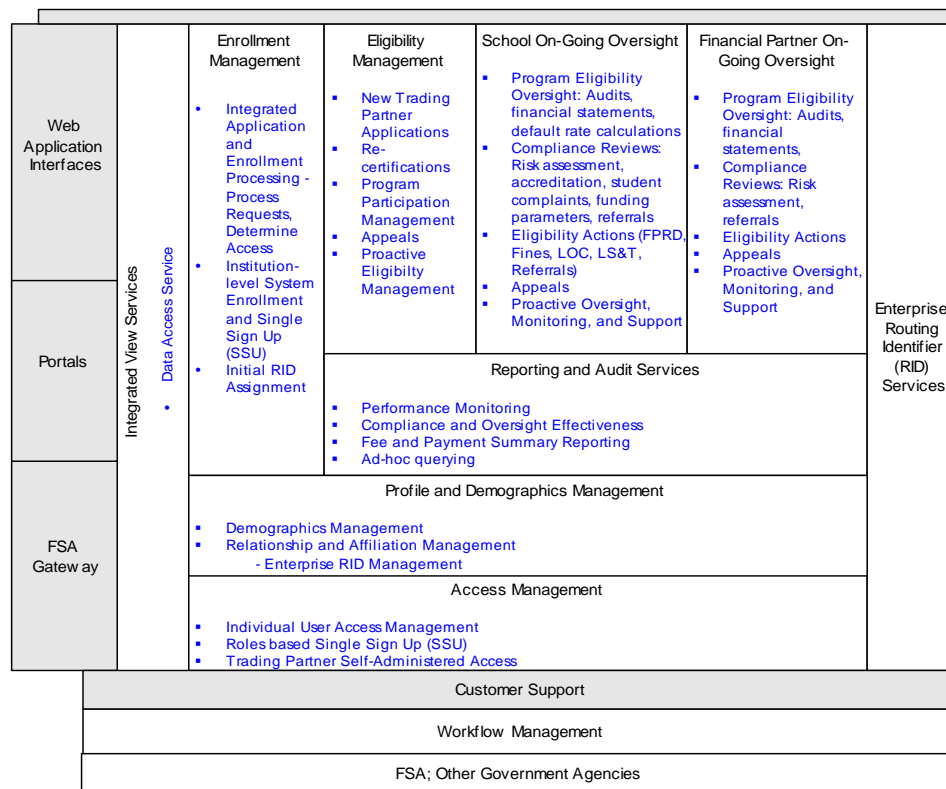


Figure 1 – FSA Trading Partner Management (TPM) Framework



The second phase of the current RID initiative involves the creation of a High-Level Design for the recommended implementation option. This document addresses the High-Level Design and provides information around the high-level functional requirements, the high-level data model, and the high-level processes of the RID component of TPM. In addition, this document covers how the RID component will support Change of Affiliation, Effective Dating, and Data Access. Finally, this document provides a high-level view of how the RID component will be integrated into the FSA enterprise and what effects this integration will have on internal FSA systems and external Trading Partners.

The High-Level Design outlined in this document directly addresses the Schools portion of Performance Plan Action Item 16.2.2: "Develop requirements and initial design for Common Identifiers for Schools, Students." The Students portion was addressed within the Common Student ID (CSID), other wise known as the Standard Student Identification Method (SSIM), High-Level Design (Deliverable 123.1.22).

1.2 Scope

This deliverable covers work defined in Task Order 123 related to documentation of the High-Level Design for the recommended option for implementing the RID functionality into the FSA enterprise, as outlined in the Routing ID (RID) Implementation Options Analysis (Deliverable 123.1.24). As stated previously, the recommended implementation option is via a TPM Based Solution. As illustrated in the FSA TPM Framework figure above, the RID functionality is only one component of the TPM Solution. There are several other functions and processes that, combined with the RID functionality, will comprise TPM. Several of these functions and processes have already been addressed by various initiatives, including the eCMO initiative and the Enrollment and Access Management component of the Data Strategy initiative. The remaining functions and business processes included within the TPM Framework have yet to be addressed. These remaining functions and business processes will be addressed by the effort to perform a gap analysis of TPM and develop a set of requirements for the entire TPM Solution. This document involves solely the RID component of Data Strategy and defining the High-Level Design for implementing the RID functionality into the FSA enterprise via a Trading Partner Management (TPM) Based Solution. This High-Level Design will then be incorporated into a comprehensive High-Level Design for TPM in its entirety.

The High-Level Design for the RID component of TPM as outlined in this deliverable will focus on the establishment of Trading Partner entities, identifying their various roles (i.e., School, School Servicer, Lender, Lender Servicer, Guaranty Agency, private collection agency, state agency, federal agency, auditor, or owner), and tracking the relationships their roles have with the roles of other Trading Partner entities. The High-Level Design for the RID component of TPM will achieve the following for FSA:

- Provide documented consensus of high-level functional requirements for the RID component of TPM.
- Describe at a high-level the data and the structure required to support the RID component of TPM.



- Describe how the integrity and validity of the RID data will be maintained via the solution's design and supporting processes.
- Describe a high-level approach for phasing the adoption of the RID into the internal FSA enterprise and external Trading Partner community.
- Describe the high-level risks related to the implementation of the RID functionality into the FSA enterprise and corresponding mitigation strategies for each.
- Describe the high-level impacts to internal FSA systems and external FSA Trading Partners as a result of implementing the RID functionality into the FSA enterprise.

It is important to note that the High-Level Design for the RID component, as outlined in this deliverable, is not all encompassing. Instead, it is necessary to augment the RID component with additional information contained within TPM to provide an accurate picture of a Trading Partner entity and all the information related to it. For example, the RID component will not directly be responsible for tracking information on program eligibility. Such information is needed by Common Origination & Disbursement to accurately track reporting/attending and funding/attending information for Schools. While the RID component will not directly be responsible for tracking such information and therefore this deliverable will not include specific details on such information, this information will be tracked in TPM and will be addressed when the full picture of TPM is developed under a future effort. The assumption is that the High-Level Design for the RID component as outlined in this document will be fully integrated into TPM during this future effort. Portions of the High-Level Design for the RID component may potentially need to be adjusted to integrate with the additional functionality and processes included within TPM.

Furthermore, the High-Level Design for the RID component as outlined in this document is not intended to serve as a Detailed Design. It is assumed that the Detailed Design for the RID component will take place in conjunction with the Detailed Design for TPM in its entirety.

1.3 Methodology

An iterative approach was employed to outline, develop, and refine the various pieces of the High-Level Design for the RID component including the high-level functional requirements, the logical data model, and the high-level solution processes. Initial drafts of each of these portions of the High-Level Design were created using information from relevant discussions during previous RID phases, incorporating information gathered from FSA Subject Matter Experts (SMEs) during this phase of the RID initiative, and utilizing information identified by internal team members. These drafts were then shared with the RID Core Team during a series of Core Team meetings and Working Sessions. The following chart summarizes the key information including meeting/working session name, date, topics covered, and participants for each RID Core Team meeting and Working Session held.

Meeting/Working Session Name	Date	Topics Covered	Participants
Core Team Meeting – Schools and Financial Partners	8/12/03	<ul style="list-style-type: none">• Provided RID Status Update	<ul style="list-style-type: none">• Dave Curran• Pam Eliadis



**Data Strategy Enterprise-Wide
Routing ID
RID High-Level Design**

Meeting/Working Session Name	Date	Topics Covered	Participants
		<ul style="list-style-type: none"> Reviewed Recommended Solution for RID Implementation Outlined RID High-Level Design Approach Reviewed/Validated RID Requirements Reviewed/Validated RID Relationship Types 	<ul style="list-style-type: none"> Kristie Hansen Chris Hill Paul Hill Whitney Hoffman Angeline Iwanicki Steve Martus Tony Milidantri Mike Sutphin Theodore Taverner Brad Wilson
Core Team Data Model Working Session – Schools	8/19/03	<ul style="list-style-type: none"> Reviewed/Confirmed Trading Partner Entity Definition Reviewed RID Logical Data Model Provided Copies of Draft Process Flows for Review/Validation 	<ul style="list-style-type: none"> Rich Bennett Dave Curran Chris Hill Whitney Hoffman Angeline Iwanicki Gregory James Jay R. Long Tony Milidantri Patricia Patterson Theodore Taverner Brad Wilson
Core Team Data Model Working Session – Financial Partners	8/20/03	<ul style="list-style-type: none"> Reviewed/Confirmed Trading Partner Entity Definition Reviewed RID Logical Data Model Provided Copies of Draft Process Flows for Review/Validation 	<ul style="list-style-type: none"> John Brooks Dave Curran Pam Eliadis Whitney Hoffman Mike Sutphin Brad Wilson
Core Team Data Model Working Session – Financial Partners	8/28/03	<ul style="list-style-type: none"> Reviewed RID Logical Data Model 	<ul style="list-style-type: none"> Pam Eliadis Nettie Harding Angela Roca-Baker Brad Wilson
Core Team Data Model Working Session – Collections	9/16/03	<ul style="list-style-type: none"> Reviewed RID Logical Data Model 	<ul style="list-style-type: none"> Whitney Hoffman Steve Martus Brad Wilson
Core Team Meeting – School and Financial Partners	9/16/03	<ul style="list-style-type: none"> Provided Overview of RID Core Solution Processes Reviewed/Validated Change of Affiliation Scenarios Reviewed/Validated 	<ul style="list-style-type: none"> Rich Bennett Dave Curran Pam Eliadis Whitney Hoffman Angeline Iwanicki Steve Martus Tony Milidantri



Meeting/Working Session Name	Date	Topics Covered	Participants
		Effective Dating Examples	<ul style="list-style-type: none">• Frank Ramos• Mike Sutphin• Calvin Whitaker• Brad Wilson
Core Team Data Model Working Session – Servicing	9/22/03	<ul style="list-style-type: none">• Reviewed RID Logical Data Model	<ul style="list-style-type: none">• Whitney Hoffman• Allen Prodgors• Brad Wilson
Core Team Process Flow Working Session – Schools and Financial Partners	10/23/03	<ul style="list-style-type: none">• Reviewed RID Status and Deliverable Progress• Reviewed RID High-Level Design Deliverable Contents• Reviewed RID Component Processes	<ul style="list-style-type: none">• Rich Bennett• Bruce Bruning• Pam Eliadis• Chris Hill• Paul Hill• Whitney Hoffman• Angeline Iwanicki• Colleen Kennedy• Jay R. Long• Steve Martus• Patricia Patterson• Gregory Plenty• Allen Prodgors• Courtland Smith• Theodore Taverner• Calvin Whitaker• Molly Wyatt

Table 1 – RID Core Team Meeting and Working Sessions

Additional information related to the materials presented during each meeting/working session is presented in Appendix C: Core Team Meeting & Working Session Materials.

All comments, suggestions and/or updates made during the RID Core Team meetings and Working Sessions were noted, researched further as needed, and incorporated into the overall High-Level Design for the RID component as appropriate.

1.4 Assumptions

Through the process of defining the High-Level Design for the RID component, several assumptions were made. These assumptions have been assigned to various categories including: Data, Business/Functional, Technical, and Sequencing. The following sections detail the assumptions made under each of the aforementioned categories.

1.4.1 Data

- The RID component will maintain the key attributes and additional attributes necessary to identify a Trading Partner entity (e.g., demographic information including Trading Partner name, Trading Partner roles, Trading Partner relationships, etc.). TPM in its



entirety will maintain additional attributes not necessary to identify the Trading Partner entity (e.g., other demographic/profile information such as addresses and contact information, financial information, program eligibility, etc.). These key attributes and additional attributes will be stored within the enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture).

- The RID component will contain a data model to maintain information related to identifying the Trading Partner, its roles and the relationships that its roles have with other Trading Partner roles. This data model will need to be merged with the larger integrated data model for TPM that will contain all other information related to a Trading Partner such as other demographic/profile information including addresses and contact information, congressional district information, program eligibility information, enrollment information, etc.
- The RID component, in conjunction with the rest of TPM, will have the capability and processes in place to store the same type of information that current legacy identifiers provide (e.g., Trading Partner identification, program eligibility, financial information, etc.) and communicate this information to all systems within the FSA enterprise that require such information. More research regarding these attributes will be performed in the Trading Partner Management System (TPMS) Requirements Gap Analysis.
- The RID component will utilize effective dating to maintain a historical record of changes to Trading Partners, their roles, and the relationships between their roles and the roles of other Trading Partners. Effective dating will allow a user to identify how a particular Trading Partner looked regarding their roles and corresponding relationships at various points in time.
- The RID High-Level Design is not dependent on re-establishing history. A Trading Partner's history will not typically be re-constructed but this can be done on a case by case basis if deemed necessary. During the initial RID build, the default will be that the current Trading Partner legacy identifier values and relationships have always been effective unless a more specific history is established.
- The RID component will not map to internal legacy system keys. For example, the RID database will not contain the Total System Services (TSYS) School ID which is used as an internal key by TSYS within the Common Origination & Disbursement (COD) system. Mapping between the RID and internal system keys should occur within each legacy system as necessary.

1.4.2 Business/Functional

- The RID component will be designed to support all FSA Trading Partners. Trading Partners are defined as those business entities that directly conduct business with FSA. The RID component design will be data driven meaning that it will be able to support additional Trading Partners as needed. Initially, the FSA Trading Partners have been identified as follows:
 - Schools
 - School Servicers
 - Lenders



- Lender Servicers
 - Guaranty Agencies
 - Private Collection Agencies (PCAs)
 - State Agencies
 - Federal Agencies
 - Auditors
 - Owners
-
- All business areas within the future FSA enterprise as defined during the various Data Strategy retreats including Application (i.e., Central Processing System functionality), Origination & Disbursement (i.e., Common Origination & Disbursement functionality), Trading Partner Management (i.e., includes portions or in some cases all of the functionality formerly performed by Electronic Campus Based, the Postsecondary Education Participants System, Participation Management, eZ-Audit, Common Origination and Disbursement, and the tools utilized by Case Management Oversight), Common Services for Borrowers (i.e., Direct Loan Servicing System, Direct Loan Consolidation System, Debt Management Collections System, and Conditional Death and Disability Tracking System functionality), Financial Management (i.e. Financial Management System functionality), Partner Payment Management, and Enterprise Analytics and research (i.e., National Student Loan Data System and other enterprise-wide analytical functionality) are expected to utilize the RID as the key identifier for Trading Partners.
 - TPM will be the front door for Trading Partner interactions and creation of RIDs for Trading Partners. The data related to Trading Partners will reside in a Common Data Architecture. The Common Data Architecture will be in place when TPM is in place.
 - While RID will help manage Change of Affiliation issues by tying the identifier to each Trading Partner entity rather than to a specific location, RID is not a business process change, but rather a tool that will help address current anomalies within existing business processes (e.g., Change of Affiliation). Separate re-engineering/ re-examination efforts for some business processes will be necessary to explore complete resolution of Change of Affiliation issues.
 - RID is a single common identifier for all Trading Partners across the enterprise, irrespective of system or function.
 - RID is an eight-digit numeric key that signifies nothing about the numbered Trading Partner entity other than its identity.
 - RID numbers are permanent and shall be protected from physical deletion once they are assigned. RID numbers can be logically deleted (i.e., inactivated) through the expiration of the various roles that make up a particular Trading Partner entity.
 - The RID component manages the creation and maintenance of Trading Partners, their roles, and the relationships of their roles with other Trading Partner's roles, and submits this information to the enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture). The rest of the FSA enterprise will retrieve this information from the Common Data Architecture whenever necessary.



- Individual legacy systems apply their own business rules/processes given the Trading Partner, its roles, and the relationships of its roles with other Trading Partner's roles information they receive from the Common Data Architecture.
- The RID component will respond to new requests for identifiers. The RID component will not be responsible for creating the trigger that signifies the need to interact with the RID component. This trigger will come from either the Trading Partner Enrollment process that every new Trading Partner entity must go through, the Trading Partner Recertification process required for Schools, and/or a request from an FSA approved staff member.
- The High-Level Design for the RID component includes a high-level impact assessment on internal FSA systems and external Trading Partners. This high-level impact assessment is not intended to be a full detailed impact assessment. Such an impact assessment will have to be conducted as a part of future TPM initiatives.

1.4.3 Technical

- The technical architecture of the RID component will be constructed in conjunction with the technical architecture of TPM. Limited/minimal technical architecture for the RID component will be addressed during the High-Level Design phase.
- The technical architecture for TPM will be influenced by the recommendations for internal and external data exchange, and data storage as outlined by the Data Strategy initiative.

1.4.4 Sequencing

- The RID component will be included into the larger TPM and will therefore be implemented into the FSA enterprise when TPM is implemented.
- The phased implementation of the adoption of the RID within the internal FSA enterprise and external Trading Partner community will only take place after the RID component portion of the TPM implementation is complete and RID generation and relationship tracking is taking place within TPM. At that time the following should be true:
 - TPM includes portions or in some cases all of the functionality formerly performed by Electronic Campus Based (eCB), Postsecondary Education Participants System (PEPS), Participation Management (PM), eZ-Audit, Common Origination and Disbursement (COD), and the tools utilized by Case Management Oversight
 - TPM continues to generate some legacy identifiers will triggering requests to generate others within the appropriate legacy systems
 - Ownership of RID creation has been transferred from COD to TPM
 - COD is able to accept the RID from TPM
 - The portion of the Common Data Architecture related to Trading Partner information has been developed and is functioning as expected
 - Communication of the RID to the enterprise occurs via the use of the Common Data Architecture by the individual legacy systems



- Schools Program personnel are the primary users of TPM
 - FSA has developed Communication Plan for providing External Partners information about what the RID is, how it is used, how it works, and a general timeline for when changes will need to be made
- The high-level sequencing approach for the phased implementation of the RID into the FSA enterprise will include plans for retiring legacy identifiers aside from the OPEID, Grantee and Payee DUNS Numbers, and Tax Payer Identification Number (TIN). The DUNS Number and the TIN Number will always be required and the OPEID will be maintained for an indefinite period.



2 High-Level Functional Requirements

This section of the High-Level Design for the RID component details the high-level functional requirements that the proposed solution must fulfill. Documenting the high-level functional requirements for the RID component began with first outlining the business objectives for the RID initiative and then defining the vision of the RID component.

During the first phase of this RID effort, the RID team worked with the FSA Core Team of key subject matter experts (SMEs) and business owners to establish the business objectives for the RID initiative. The high-level business objectives for the RID initiative, as well as a brief description of each, are presented in the following table.

Business Objective	Description
Single Common Identifier	Provide FSA Trading Partners a means to interact with FSA systems and services using a single common identifier across the enterprise, irrespective of the system or function.
Enterprise Solution for Management of Partner Identities	Create an enterprise solution for management of partner identifiers by: <ul style="list-style-type: none">• Leveraging a non-descriptive identifier for each partner;• Enhancing the process to create/maintain relationships among partners;• Developing the ability to easily segment and report on FSA partners;• And reducing FSA administrative effort required to maintain partner identifiers.
Minimize Impact	Minimize impact to established partner interactions by implementing a RID component that is as transparent to the current Trading Partner interactions as possible.
Gradual Phase-in	Gradually phase-in the adoption of the RID into the internal FSA enterprise and the external Trading Partner community so as not to force internal systems and external partners to undergo an immediate conversion or burden them with additional identifiers. For more information on a high-level sequencing approach for the adoption of the RID, please refer to Section 9.3 – RID High-Level Sequencing Approach.
Increase Data Quality	Increase the data quality of information maintained about FSA partners by providing an enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture). The RID component will be primarily responsible for maintaining the Trading Partner related data stored within the Common Data Architecture.

Table 2 – RID High-Level Business Objectives

These high-level business objectives were then used to create the overall functional vision of the RID component. The vision, as defined by key FSA stakeholders and business owners, is to provide for a consistent manner in which to identify Trading Partners across the enterprise, regardless of system or function, and provide FSA a holistic view of Trading Partner interactions occurring within the FSA enterprise. The functional vision of the RID component was further developed to align with the chosen implementation option (i.e., implementing the



RID functionality within a TPM Based Solution), additional Data Strategy project initiatives (e.g., Enrollment and Access Management), and information gathered during previous analysis phases. The following figure illustrates the functional vision of the RID component, highlighting its capabilities and external relationships.

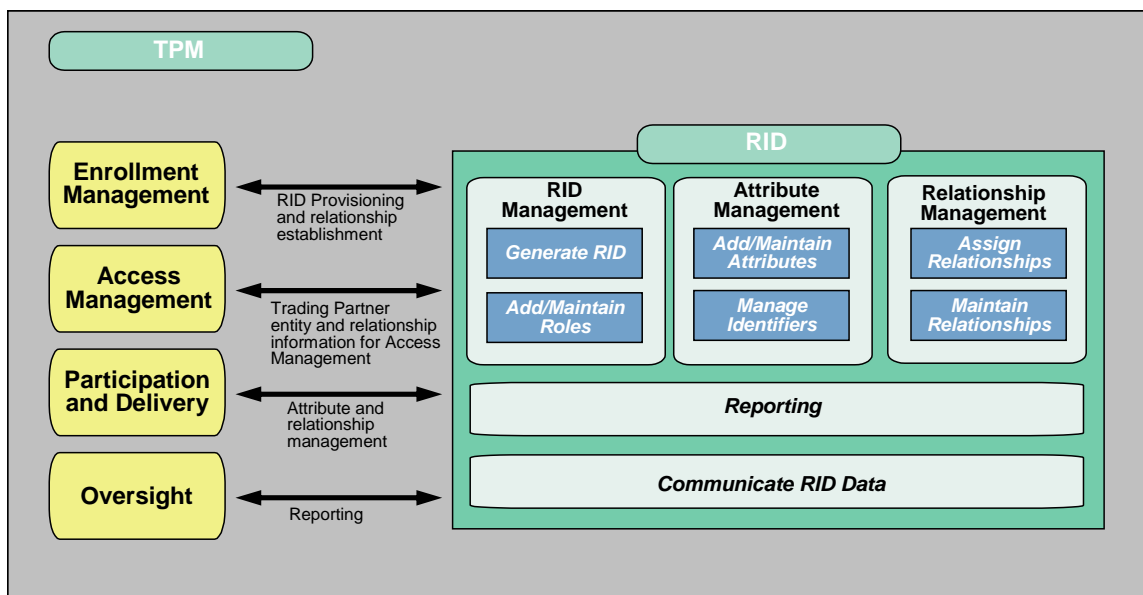


Figure 2 – Functional Areas of RID Component

As noted in the above figure, the RID component has five primary functional areas. The following table provides a brief description of each of these areas.

Functional Areas	Description
RID Management	Consists of generating the RID for each Trading Partner entity and adding/maintaining the roles (i.e., School, School Servicer, Lender, Lender Servicer, etc.) that each particular Trading Partner performs.
Attribute Management	Consists of adding/maintaining the attributes (i.e., name, address, contact, etc.) of each Trading Partner as well as managing the legacy identifiers tied to each.
Relationship Management	Consists of assigning/maintaining the various relationships that a particular role of a Trading Partner has with roles of other Trading Partners.
Reporting	Consists of generating the various oversight reports that will enable FSA to gain a holistic view of the Trading Partner interactions taking place within the enterprise.
Communicating RID Data	Consists of providing information related to a



Functional Areas	Description
	particular Trading Partner, its roles, and the relationships of those roles with the roles of other Trading Partners.

Table 3 – RID Functional Component Descriptions

These five functional areas serve as a major source of the High-Level Functional Requirements for the proposed solution. Additional requirements were collected in areas such as general requirements, initial load and start up requirements, and user interface requirements.

Overall there are seven different categories of requirements including:

- General Requirements
- Initial Load & Start Up Requirements
- Add New/Modify Existing Trading Partner Requirements
- Assign & Maintain Trading Partner Relationships Requirements
- Communicate RID Data Requirements
- User Interface Requirements
- Generate Reports Requirements

The following sections detail the types of requirements gathered for each category. A detailed matrix including all of the high-level functional requirements for the RID component can be found in Appendix D: High-Level Functional Requirements Matrix.

2.1 General Requirements

This category of requirements covers the overarching requirements for the RID component. These requirements range from requirements related to the exact make up of the RID (i.e., a randomly generated eight-digit number that has no inferable meaning other than identifying a single Trading Partner) to how the RID component will have to integrate with the existing FSA technical architecture, conform to FSA security standards, and support FSA Security Architecture components such as Access Management.

2.2 Initial Load & Start Up Requirements

This category of requirements covers the requirements related to the steps that must be completed during the initial load and start up phase for the RID component. These requirements range from the requirements necessary to perform synchronization on legacy identifiers for the existing Trading Partners to the actual loading of existing Trading Partners into the RID database.

Additionally, this category covers the requirements related to assigning the existing Common School IDs that have been generated by COD for Schools as RIDs and potentially assigning the existing Lender IDs (LIDs) that have been generated by the Financial Management System (FMS) for Financial Partners as RIDs. In regards to assigning the existing LIDs as RIDs for the Financial Partners a decision will have to be made as to whether this is the best option or not.



For more information on the various options for Financial Partners, please refer to Section 11.3.2 – Lenders and Section 11.3.3 – Guaranty Agencies (GAs).

2.3 *Add New/Modify Existing Trading Partner*

This category of requirements covers the requirements directly related to two of the five functional areas mentioned above, RID Management and Attribute Management. These requirements range from the requirements necessary to add a new Trading Partner to the enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture) to the requirements necessary for updating an existing Trading Partner within the Common Data Architecture.

When a request is received by the RID component, a determination will have to be made as to whether it is a request to add a new Trading Partner or modify an Existing Trading Partner. If the request is to add a new Trading Partner then a new RID will have to be generated, and the role(s) (i.e., School, School Servicer, Lender, Lender Servicer, etc.) the Trading Partner performs will have to be added. In addition, the corresponding legacy identifier(s) for each role will have to be added. If the request is to modify an existing Trading Partner then the determination will have to be made as to what type of modification is necessary (i.e., changing the Trading Partner name, adding or deleting Trading Partner roles, or adding or deleting corresponding legacy identifiers). Once this determination is made, the proper modification will then be processed. The requirements for all aspects of adding a new Trading Partner or modifying an existing Trading Partner are included within this category.

2.4 *Assign & Maintain Trading Partner Relationships Requirements*

This category of requirements covers the requirements directly related to the Relationship Management functional area mentioned above. These requirements range from the requirements necessary to assign new relationships between the roles of various Trading Partners to the requirements necessary to modify existing relationships between the roles of various Trading Partners.

There are two main types of relationships that can be created, business relationships or grouping relationships. These two main relationship types are distinct. Business relationships are established between Trading Partner roles that have a direct business relationship with one another. Examples of business relationships include tier one/tier two relationships (i.e., parent/child or otherwise known as main/additional location), customer/supplier relationships (i.e., Lender/Lender Servicer), or owner/owned relationships (i.e., corporation/School). Grouping relationships are created to group a number of seemingly unrelated Trading Partners together for the purpose of analytics and reporting. Grouping relationships may also be referred to as roll-up relationships. An example of such a relationship is grouping all law Schools on the East Coast. The requirements for establishing and maintaining these two distinct types of relationships are covered under this category.



2.5 *Communicate RID Data Requirements*

This category of requirements covers the requirements directly related to the Communicate RID Data functional area mentioned above. These requirements range from the requirements necessary to maintain a cross reference table of RIDs to corresponding legacy identifiers that enables the translation of a legacy identifier into a RID and vice versa to the requirements necessary for communicating the assigned RIDs, their role(s), and the relationships related to each role(s) to all internal and external parties requiring such information.

Communication of the RID data will be extremely important as not all internal and external parties will be ready to communicate using only the RID at the same time. Instead, the use of the RID will be phased into the internal FSA enterprise and then gradually rolled out to the external Trading Partners. This being the case, the RID component must have the capability to communicate using either the RID or the existing legacy identifiers until all internal and external parties are communicating using only the RID. The requirements for being able to communicate using either the RID or the corresponding legacy identifiers are covered under this category.

2.6 *User Interface Requirements*

This category of requirements covers the requirements directly related to the user interface that will be necessary to allow FSA approved staff members to access and maintain the RID component. FSA approved staff members will have to be identified and access rules for TPM will have to be set forth during future TPM initiatives.

FSA approved staff members will need access to the RID component to perform a variety of functions including submitting requests to add a new Trading Partner or modify an existing Trading Partner, submitting requests to assign new Trading Partner relationship or maintain existing Trading Partner relationships, and running ad hoc queries based on particular Trading Partner attributes or other user defined criteria for analytic and reporting purposes, to name a few. The requirements for performing such tasks are covered under this category.

2.7 *Generate Reports Requirements*

This category of requirements covers the requirements directly related to the Reporting functional area mentioned above. These requirements range from the requirements necessary to create systematic audit and error reports to the requirements necessary to create user defined ad hoc audit and error reports.

Reporting will be an extremely important function of the RID component. It is this function that will allow FSA to gain a holistic view of all Trading Partner interactions throughout the enterprise. The reporting function will produce two main types of reports, error reports and audit reports. These reports should be able to be produced both formally on a daily/weekly/monthly basis and informally on an ad hoc basis (i.e., at any time). The formal reports will be automatically produced by the system while the ad hoc reports will rely on a



manual trigger from an FSA approved staff member. The requirements for generating these reports are covered under this category.



3 RID Component Overview

The RID component will be responsible for generating and/or assigning RIDs for all Trading Partners directly interacting with FSA and tracking the relationships these Trading Partners have with one another. As mentioned previously, the Trading Partners currently identified include Schools, School Servicers, Lenders, Lender Servicers, Guaranty Agencies (GAs), Private Collection Agencies (PCAs), Federal Agencies, Auditors, and Owners. The RID will be an eight-digit randomly generated number that will convey nothing about the Trading Partner aside from its identity. The use of a non-intelligent number is a key feature of the RID component. Currently FSA utilizes the OPEID as one of the main identifiers for its Trading Partners. The OPEID is a “smart” number meaning that its digits indicate specific things about the particular Trading Partner. For example, the last two digits dictate whether the Trading Partner is a main location or an additional location (i.e., the suffix of ‘00’ indicates a main location while suffixes of ‘01,’ ‘02,’ ‘03,’ etc. indicate additional locations). The use of this “smart” number has caused issues in processing Change of Affiliation requests since Change of Affiliation requests often involve switching main locations and additional locations. Since the OPEID is tied to a specific location, it is not able to move with the Trading Partner. The RID is a non-intelligent number that as mentioned previously will convey nothing about the Trading Partner aside from its identity. The use of a non-intelligent number will help alleviate issues in processing Change of Affiliation requests since the RID will always move with the Trading Partner it has been assigned to.

Trading Partner entities will be comprised of the various roles they perform (i.e., School, School Servicer, Lender, Lender Servicer, Guarantor, Guarantor Servicer, etc.). Each Trading Partner entity will be assigned a single RID no matter how many different roles they may perform. For example, if a School is also a School Servicer, the School and the School Servicer will be considered one Trading Partner entity that will receive a single RID that contains two distinct roles. The Trading Partner role types that are currently defined include School, School other, School Servicer, Lender, Lender Servicer, Guarantor, Guarantor Servicer, private collection agency, state agency, federal agency, auditor, owner, and grouping. For more information on the various Trading Partner role types that will be included within the RID component, please refer to Section 4.4.1.3 – TRADING PARTNER ROLE TYPE.

Each Trading Partner role type will have corresponding legacy identifier(s). For example, a School role will have a corresponding OPEID, and a Pell ID and/or a DL ID depending upon the programs for which it is eligible. These legacy identifier(s) will be tracked by the RID component within a Legacy Identifier Crosswalk. This crosswalk will facilitate communication among systems internal to the FSA enterprise and communication between external Trading Partners and FSA by translating RIDs to legacy identifiers and vice versa until all internal and external communication is done using only the RID. Since the adoption of the RID will be gradually phased in, such a crosswalk will be paramount in enabling all internal systems and external Trading partners to talk the same language while using different identifiers. For more information on the Legacy Identifier Crosswalk, please refer to Section 9.1.3 – Legacy Identifier Crosswalk and RID Storage.



Tracking relationships between Trading Partners will be one of the most vital roles that the RID component will play. As mentioned above, a Trading Partner will actually be comprised of the various roles that the particular Trading Partner performs. Because of this, Trading Partner relationships will be tracked at the role level rather than at the Trading Partner level. If Trading Partner relationships were tracked at the Trading Partner level rather than the role level, it would be impossible to distinguish which roles were involved within the particular relationship. For example, if the relationship was simply tracked as Trading Partner 'A' having a relationship with Trading Partner 'B' and Trading Partner 'A' is both a Lender and a Lender Servicer and has a relationship with Trading Partner 'B' who is only a Lender, there would be no way to know if the relationship was between the Lender role of 'A' and the Lender role of 'B' or the Lender Servicer role of 'A' and the Lender role of 'B.' To alleviate this issue the relationship would be tracked between the Lender Servicer role of 'A' and the Lender role of 'B.' This concept is illustrated in the following figure.

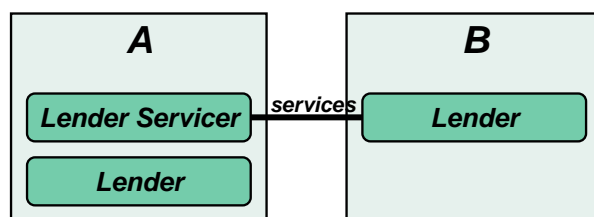


Figure 3 - RID Component Relationship Tracking Example

Understanding the relationships that exist among the various Trading Partner roles will allow FSA to construct a holistic picture of a specific Trading Partner and the other Trading Partners with which it interacts on a regular basis. In addition FSA will be able to construct a holistic picture of a group of Trading Partners that may appear unrelated from a business standpoint but who need to be looked at for reporting and or analytical purposes. Any changes to the relationships between the various Trading Partner roles will be tracked so that the picture constructed will always be accurate.

While a list of Trading Partner types currently identified as needing to receive RIDs has been created, as indicated above, other types of Trading Partners may be identified as needing to receive a RID in the future. This being the case the RID component has been designed to be to be flexible enough to handle this. The RID component will be data driven meaning that if additional Trading Partners are identified as needing to receive RIDs additional roles, legacy identifiers, and relationship types can be easily added to the RID component without changing its overall design or existing functionality.

In addition to generating and assigning RIDs for Trading Partners and tracking the relationships among the roles of the various Trading Partners, the RID component will also support the proper handling Change of Affiliation transactions, provide effective dating that will allow a picture of how a Trading Partner appeared at a specific point in time or over a specific period of time to be constructed, and allow FSA approved staff members a method for



accessing data about a particular Trading Partner or group of Trading Partners. These functions will be instrumental in helping to enhance the oversight capabilities for monitoring Trading Partners and their interactions within the FSA enterprise. For more detailed information on each, please refer to Section 6 – Support of Change of Affiliation, Section 7 – Support of Effective Dating, and Section 8 – Support of Data Access, respectively.

3.1 Solution Features

There are several key features to the RID component as mentioned above. The following table outlines these features and provides a brief description of each.

Feature	Description
Use of a Non-intelligent Number	The RID component will assign RIDs to all Trading Partners directly conducting business with FSA. The RID, unlike the OPEID, will be a “non-intelligent” number meaning that it will convey nothing about the Trading Partner aside from its identity. The use of this “non-intelligent” number will help alleviate issues in processing Change of Affiliation requests since the RID will always move with the Trading Partner it has been assigned to unlike the OPEID which is tied to a specific location and must stay with that location.
Cross Reference Capability	The RID component will maintain a Legacy Identifier Crosswalk that will enable translation of a RID to its corresponding legacy identifier(s) or vice versa. This feature will be paramount during the phased implementation of the RID into the FSA enterprise. The crosswalk will allow all internal systems and external Trading Partners to talk the same language even if they are using different identifiers until all internal and external communication is conducted using only the RID.
Effective Dating	The RID component will keep a history of changes to Trading Partners, their roles, their legacy identifiers, and relationships through the use of effective dates (i.e., start and end dates). These dates will enable a picture to be constructed at any time of how a particular Trading Partner appeared at a specific point in time or over a specific period of time.
Data Access	The RID component will enable FSA approved staff members to access data about a particular Trading Partner or group of Trading Partners by using the RID as the key for pulling such information from the enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture).



Feature	Description
Flexibility	The RID component is designed to be data driven. This enables the RID component to easily adapt to changing business processes or the addition of new Trading Partners, other role types, legacy identifiers, or relationships that may be identified in the future without changes to the overall design or existing functionality.

Table 4 – RID Component Features

3.2 Solution Benefits

There are a number of benefits that FSA and its external Trading Partners will experience as a result of the implementation of the RID component. The following table outlines these benefits and provides a brief description of each.

Benefit	Description
Simplified Trading Partner Interactions with FSA	The RID component will assign RIDs to all Trading Partners directly conducting business with FSA. The assigned RIDs will gradually be rolled out to external Trading Partners to be used in their interactions with FSA. Currently, Trading Partners are required to present different identifiers to FSA based on the system or business process they are interacting with. The use of the RID will simplify Trading Partner interactions by alleviating the need for presenting different identifiers since all future interactions will only require the RID.
Streamlined Intra-FSA System Interactions	The RID component will assign RIDs to all Trading Partners directly conducting business with FSA. The assigned RIDs will serve as the primary identifier of all Trading Partners within the FSA enterprise. All internal systems will be phased into accepting the RID and using it for processing purposes in place of other legacy identifiers that are currently used. The use of the RID as a single common identifier for all Trading Partners will lead to streamlined intra-FSA system interactions since all systems once all internal systems are communicating utilizing only the RID.
Reduced Cross-system Business Processing Errors	The RID component will pass all assigned RIDs to the enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture). The RID component will be responsible for maintaining the RIDs as well as their associated roles, legacy identifiers and relationships but this information will be stored within a single enterprise solution that all internal



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Benefit	Description
	systems will have access to. Storing the RID related data in a single enterprise solution and having the RID component be the primary system responsible for making updates will result in reduced cross-system business processing errors that occur today as a result of discrepancies with legacy identifiers stored within the current legacy systems.
Increased Data Quality	The RID component will enable increased data quality by simplifying Trading Partner Interactions with FSA, streamlining intra-FSA system interactions and reducing cross-system business processing errors.
Enhanced Customer Service	The RID component will enable enhanced customer service by increasing the data quality of the data maintained about its Trading Partners. Increased data quality will allow FSA staff members to have an accurate picture of the interactions of a specific Trading Partner or group of Trading Partners. Such a picture will enable FSA staff members to more easily respond to questions raised by their customers.
Enhanced Cross-system Reporting and Analytic Capabilities	The RID component will enable enhanced cross-system reporting and analytic capabilities by providing a user interface that will enable FSA approved staff members to run ad hoc queries about a specific Trading Partner or group of Trading Partners. The RID will serve as the key for pulling information from the enterprise solution for storing all Trading Partner related data. These ad hoc queries could be as simple as determining all of the relationships related to a particular Trading Partner role or potentially as complex as determining the cohort default rates for all campuses within the City University of New York (CUNY) system.
Reduced Manual Effort of FSA Staff in Handling Exceptions and Gathering Information About a Particular Trading Partner or Group of Trading Partners	The RID component will help reduce the current manual efforts required by FSA staff members in handling exceptions and/or gathering information about a particular Trading Partner or group of Trading Partners. Currently, many staff members spend an excessive amount of time handling Change of Affiliation requests that did not process correctly. The RID component will help minimize the number of Change of Affiliation requests that do not process correctly by utilizing a “non-intelligent” number that is not tied to a specific location but rather follows the Trading Partner it



Benefit	Description
	<p>was assigned to. Additionally, many staff members spend an excessive amount of time gathering information about a particular Trading Partner or group of Trading partners for reporting and analytical purposes. Much of this information is not specifically tracked within an existing system but rather in the heads of particular staff members. This makes gathering such information a cumbersome job. The RID component will help to alleviate this issue by tracking general information related to Trading Partners and specific information related to the relationships their roles have with the roles of other Trading Partners. This information will be accessible to FSA approved staff members via a user interface whenever necessary.</p>

Table 5 – RID Component Benefits



4 High-Level Logical Data Model

This section of the High-Level Design for the RID component details the proposed solution's underlying data architecture through the description of a high-level logical data model. The data architecture is central to the operation of RID component and its ability to meet the previously stated High-Level Functional Requirements. The following sections include information on key concepts, modeling approach and conventions, model overview and features, model description, model integration into FSA enterprise, and Detail Design considerations.

4.1 Key Concepts

Discussions with FSA during requirements collection and initial solution concept design resulted in several key concepts which set the direction of the logical data model development. These concepts, defined below, set the backdrop for the model's description:

- **Trading Partner Definition** – Early in the process, an agreement was reached on the definition of a Trading Partner, namely: A Trading Partner is an external business entity that conducts business or exchanges information directly with FSA.
- **Trading Partner Roles** – A distinction was made between a Trading Partner and the roles they might play with FSA or within the industry. As an example, a Lender may act as both a Lender and a Lender Servicer for other Lenders. In this case, one Trading Partner is performing multiple roles. The solution design must support this capability.
- **Trading Partner Relationships** – Building on the previous concept, Trading Partner relationships are not between the Trading Partner entities, but rather the roles associated to the Trading Partner. In this manner, the model will more closely resemble actual business relationships that are established with FSA or within the external environment. In addition to business relationships the RID component will allow for grouping relationships that bring together a group of seemingly unrelated Trading Partners for reporting and analytical purposes. For more information on the types of Trading Partner relationships supported by the RID component, please refer to Section 4.4.1.7 – TRADING PARTNER RELATIONSHIP TYPE.

4.2 Modeling Approach and Conventions

A data model is the representation of the data elements and the relationships among those elements in an existing or planned system. A data model incorporates the business rules describing the interactions among information elements. Several different levels of data models may be created throughout the development lifecycle. This High-Level Design includes a logical data model that provides an implementation-independent specification of the data and relationships necessary to support the business needs.



4.2.1 Approach

In order to develop the logical data model for the RID component, a standard data modeling methodology was followed. Once business requirements were collected, a high-level entity relationship diagram (ERD) was created to represent the information necessary to support the implementation of the RID component within the enterprise. From this ERD, a high-level logical data model was developed containing the necessary entities and attributes to support the captured high-level functional requirements.

On creation of the initial logical data model, several review cycles were conducted to exercise the model against current data and scenarios. This review process, done with FSA and Integration Partner personnel, provided feedback on the model's structure to facilitate model refinement. A primary concern was the model's ability to support Change of Affiliation scenarios. These scenarios were explicitly examined in detail to ensure the model's ability to support them. For more information on the RID component's ability to support Change of Affiliation, please refer to Section 6 – Support of Change of Affiliation.

Finally, it is important to note that since the RID component is actually targeted to be a part of the TPM Solution, the RID ERD and subsequently created logical data model do not include information assumed to be captured within other areas of TPM. Scoping of what is within the RID component versus what is within TPM was done during the ERD development process. A detailed explanation of these boundaries and their rationale are provided in subsequent sections. The boundaries of the RID component were presented to FSA via several forums, including the Business Integration Group (BIG).

4.2.2 Terminology

Several key terms will be used throughout the description of the model and subsequent examples. A common understanding of these terms is imperative to properly understand the model and its operation. The following table defines several key terms:

Term	Definition
Entity	<p>A person, place, thing, concept or event of interest to the enterprise. The entity is always described with singular nouns. Examples include: School, School Servicer, Lender, Lender Servicer, and Guaranty Agency. Two types of entities are possible within the constraints of the model: independent and dependent entities.</p> <ul style="list-style-type: none">• <i>Independent entities</i> depend on no other entity for their identification.• <i>Dependent entities</i> depend on other entities for their identification.
Attribute	<p>A fact, property or characteristic of an entity with only one meaning. Example attributes include: RID, Trading Partner Name, Trading Partner Role Code and Legacy Identifier.</p> <p>Attributes used for the unique identification of an entity are known as <i>primary keys</i>. A compound primary key requires more than one attribute to form a unique primary key. A <i>Foreign Key</i> is a primary key attribute within a dependent entity that was inherited from another entity.</p>



Term	Definition
Relationship	Describes a meaningful association between occurrences of one or more entities that provides some relevant and valuable information. It may be further described as a rule about how entities work together. Relationships are named with verbs or verb phrases to indicate the association. Relationships may be identifying or non-identifying <ul style="list-style-type: none">• <i>Identifying relationships</i> indicate that the unique identification of an instance of the child depends upon knowing the identity of the associated instance of the parent.• <i>Non-identifying relationships</i> signify that the unique identification of the instance of the child does not depend upon knowing the identity of the parent instance.
Cardinality	Describes the degree and the nature of relationships. The degree of the relationship is how many times the relationship occurs. Cardinality degrees include: One-to-one, One-to-many, Many-to-many, etc. The nature of the relationship dictates whether the relationship is mandatory or optional.
Subject Area	Describes a set of related entities and relationships. The logical data model for the RID component is considered to be one subject area while TPM will possess several additional subject areas (e.g., profile, demographics, etc.).

Table 6 – Data Model Key Terminology

4.2.3 Diagram Conventions

There are many distinct notations for documenting and communicating ERDs. One common notational structure is the Integration Definition for Information Modeling (IDEF1X).² This standard was originally developed by the US Air Force and has since been widely adopted.

In this structure, entities are represented with boxes. Independent entities are depicted with square corners while dependent entities are depicted with rounded corners. Key attributes, those that uniquely identify an instance of an entity, are listed inside of the entity box above an inner line as seen in the following figure.

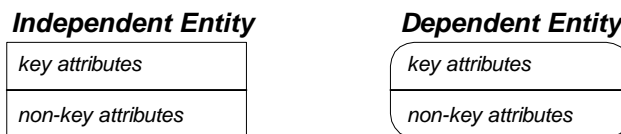


Figure 4 – Entity Diagram Conventions

Connecting lines between entities represent relationships. Symbols on the lines indicate cardinality of the relationships as seen below. There are four kinds of relationships in IDEF1X modeling. Each kind can be either identifying or non-identifying. These relationships are indicated either by a solid line (identifying) or a dashed line (non-identifying) in data models.

² National Institute of Standards and Technology (NIST) Federal Information Processing Standards Publication (FIPS PUB) 184 - Integration Definition for Information Modeling (IDEF1X) (December 1993).



Cardinality	Identifying	Non-Identifying
One to Zero, One, or More	—————●	-----●
One to One or More	—————P●	-----P●
One to Zero or One	—————Z●	-----Z●
Zero or One to Zero, One, or More		◊-----●
Zero or One to Zero or One		◊-----Z●

Table 7 – Relationship Diagram Conventions

4.3 Model Overview and Features

The ERD for the RID component, as shown in the following figure, contains two entities: TRADING PARTNER and TRADING PARTNER ROLE. The TRADING PARTNER entity defines the FSA Trading Partner, or business entity that is conducting business or exchanging information with FSA. The TRADING PARTNER ROLE entity defines the roles that an FSA Trading Partner may perform.

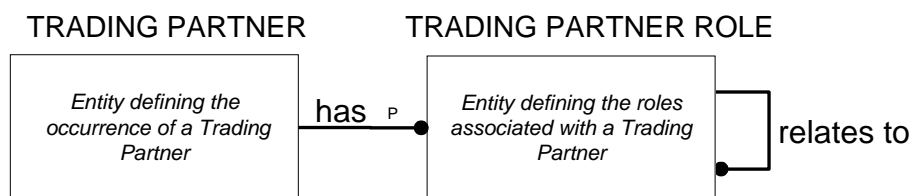


Figure 5 – RID Component ERD

The above figure may be read as follows:

- An instance of a Trading Partner **has** one, or more Trading Partner Role(s)
- Each Trading Partner Role **relates to** zero, one or more Trading Partner Role(s)

The concept of separating the role a Trading Partner plays (e.g., School, Lender, etc.) from the definition of a Trading Partner is distinct from the current FSA environment. Currently, identifiers are tied directly to a type, or role, of Trading Partner. Thus, if a Trading Partner performs more than one role, they would receive multiple identifiers. In fact, it is even more nebulous in the current environment as Trading Partners may receive multiple identifiers even if they have only one role (e.g., a School may receive several program specific identifiers).

Building the conceptual ERD in a logical data model requires the definition of the entities supporting the ERD and their associated attributes. Further, the logical data model contains a full set of entities and attributes necessary to support the defined requirements for the RID component. The RID component logical data model is described in further detail in Section 4.4 – Logical Data Model Description.



As noted previously, there are many additional data elements that will be related to the core RID component information as a part of the larger TPM. These elements will be identified at aggregate level in order to provide the context in which the RID component is seen operating.

4.3.1 Logical Data Model Benefits

The logical data model developed to support the RID High-Level Design has several key features. Most importantly, the model was developed for flexibility to support the evolution of FSA business processes and the changing higher education environment and partner landscape. Trends such as virtual campuses, on-line and distance learning, foreign School locations, and School Lenders all contribute to the complexity of appropriately identifying entities within FSA. Below are the key model benefits in support of the RID High-Level Design:

- **Simplicity** – The model is not overly complex as to inhibit adaptation/integration into a larger enterprise model.
- **Flexibility** – The model is flexible in its support of the business processes currently existing or envisioned within the future.
- **Data Driven** – The model supports inclusion of additional roles and relationship as required to support changing business processes.
- **Effective Dating** – The model supports historical accuracy in the data contained within the solution since the model was designed to allow pre and post dating of information while maintaining the details of when the modifications were made.
- **Accommodate Legacy Identifiers** – The model supports the preservation of legacy identifiers for an indefinite period of time. As the solution is integrated into the enterprise, there will be a continued role of legacy identifiers to maintain business processes and operations until all internal systems and external Trading Partners are communicating utilizing only the RID. These legacy identifiers will be cross referenced to their corresponding RID through the use of a Legacy Identifier Crosswalk. For more information on this table, please refer to Section 9.1.3 – Legacy Identifier Crosswalk and RID Storage.

4.4 Logical Data Model Description

The logical data model has three principal entities describing the Trading Partners, their roles, and relationships. These entities are supported by additional reference entities. The following pages describe the model in more detail and provide additional business context to its application.

4.4.1 Entities & Attributes

The RID component logical data model, as shown in the following figure, contains additional details not visible in the higher-level conceptual ERD. The entities, described in detail below, contain information related to the specific types of roles and relationships existing among Trading Partners. The model also encompasses the legacy identifiers that each of the Trading Partners possess. As mentioned previously, the model supports indefinite maintenance of these identifiers.

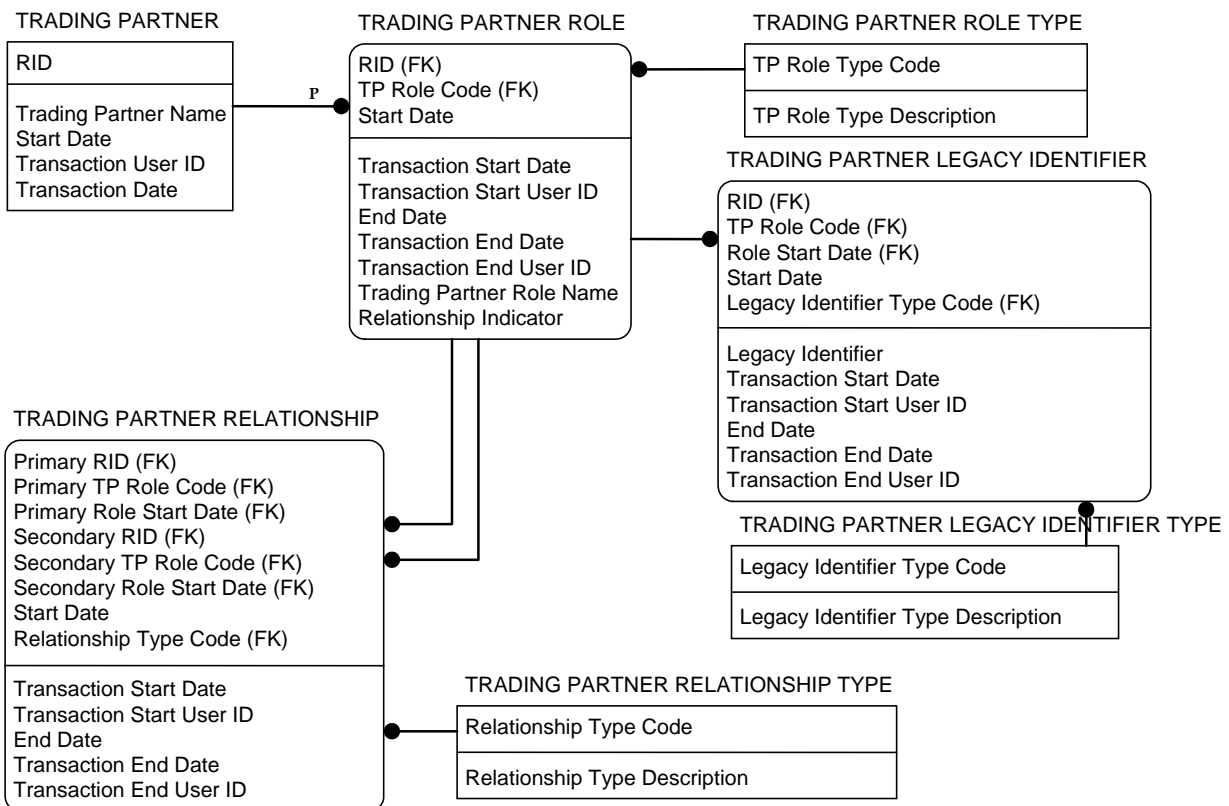


Figure 6 – RID Component Logical Data Model

The relationships present among the entities describe their interaction and the business rules incorporated within the model. As with the ERD, the logical data model relationships may be read to understand the interactions among the entities. This exercise confirms the key business rules that were incorporated into the model and solution. The relationships between the entities are described in the following sections.

4.4.1.1 TRADING PARTNER

The TRADING PARTNER entity describes the FSA Trading Partner. A Trading Partner is an external business entity with which FSA directly conducts business or exchanges information. The RID, an eight-digit random number, identifies each occurrence of a Trading Partner within the TRADING PARTNER entity. Once the RID is created within the solution, it will never be removed in order to preserve historical integrity within the enterprise. Throughout this document, RID shall refer to an occurrence of a Trading Partner within the TRADING PARTNER entity.

Additional attributes within this entity include Trading Partner Name, Start Date, Transaction Date, and Transaction User ID. The Name assigned to the Trading Partner is for reference only and is not considered to be the Trading Partner's legal name. Legal names and other nicknames would be stored with other profile information in TPM. The Start Date attribute is the effective



date for the Trading Partner's existence. This allows a Trading Partner to be established ahead of time and have the record become "active" at a specified point in time. This concept, used throughout the model, also allows for backdating critical information. The Transaction Date and Transaction User ID capture the actual time and person/system inserting the information into the solution.

The creation of the Trading Partner occurrence or RID will be dictated by the business rules of a particular business owner. For example, the business owners in the Financial Partners channel will dictate the determination if a Lender is distinct and therefore should receive a new RID. Distance education is another example where the business rules for differentiating Trading Partners must be addressed as it breaks the traditional requirements of Schools being defined by a physical location.

Although the RID component does not address these issues directly by the documentation of business rules, they were considered in the High-Level Design process. The result is a data model that provides a high degree of flexibility for current and future environments.

4.4.1.2 TRADING PARTNER ROLE

The TRADING PARTNER ROLE entity describes the roles a Trading Partner may play in the FSA enterprise. A role is defined as a distinct set of business activities normally performed by a stand-alone organization. For example, School and Lender are two unique roles defined to the FSA enterprise. For a complete listing of the currently defined roles, please refer to the description of the TRADING PARTNER ROLE TYPE entity in Section 4.4.1.3 - TRADING PARTNER ROLE TYPE.

Each instance of a Trading Partner Role is uniquely identified by a combination of three keys: the RID, the Trading Partner Role Code, and the Start Date for the Trading Partner Role Code. The RID, inherited from the TRADING PARTNER entity, identifies the Trading Partner the role is associated against. The Trading Partner Role Code defines the type of role. This attribute is inherited from the TRADING PARTNER ROLE TYPE entity. Finally, each instance also requires a Start Date in order to be uniquely identified.

The requirement of Start Date as part of the entity's primary key facilitates the concept of having a single Trading Partner have multiple occurrences of a single role. That is, a Trading Partner may have a role for two or more distinct periods of time as illustrated in the following figure. Note that for this example as shown, there would be two occurrences (i.e., database records) within the TRADING PARTNER ROLE entity.

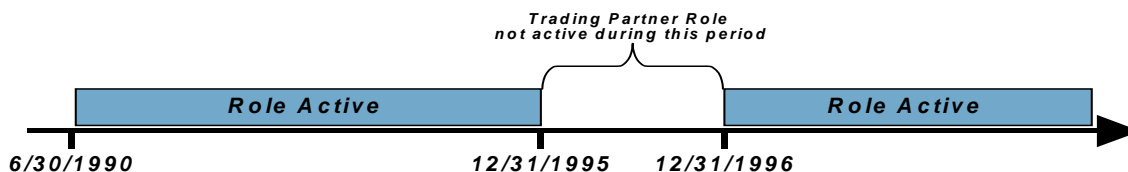


Figure 7 - Discontinuous Trading Partner Roles



Additional attributes included within the TRADING PARTNER ROLE entity include End Date, Transaction End Date, and Transaction End User ID. These attributes describe the termination of the role and the individual/system that entered the termination information.

A Trading Partner Role Name may be given to the role. This name is not necessarily the legal name and is strictly for reference purposes.

Finally, a Relationship Indicator flag indicates whether the role has any relationships. This concept may be enhanced during the Detail Design phase with the inclusion of additional indicators to facilitate increased performance.

As seen by the relationship joining the TRADING PARTNER and TRADING PARTNER ROLE entities in Figure 6 – RID Component Logical Data Model in Section 4.4.1 – Entities & Attributes, Trading Partners may have one or more roles. In most cases, Trading Partners will only have one role. Upon creation of a Trading Partner, at least one role must be assigned to prevent ambiguity or orphan RIDs.

Each Trading Partner occurrence, or RID, is restricted to a maximum of one active role of each type. For example, a Trading Partner may only have one Lender role at any point in time. This does not mean, however, that a Trading Partner cannot have multiple occurrences of the same role over discontinuous periods of time, as described above. The exception to this rule is the group role that has no limit to simultaneous occurrences associated with a single Trading Partner. For more information on the group role, please refer to the following Section 4.4.1.3 – TRADING PARTNER ROLE TYPE.

Upon termination of all Trading Partner roles associated to a Trading Partner, the RID remains in perpetuity. This preserves any historical data and provides a placeholder for any additional roles that may occur for that Trading Partner in the future.

4.4.1.3 TRADING PARTNER ROLE TYPE

The TRADING PARTNER ROLE TYPE entity describes the valid types of roles within the FSA enterprise for Trading Partners. Through the high-level functional requirements collection and logical data model development effort, an initial list of valid role types has been created. It is important to note that additional roles may be added as necessary to properly describe the all the types of Trading Partners with which FSA interacts. Each of the currently identified role types are described in the following table. The role codes presented are for illustrative purposes only and are designed for readability. Actual codes will be assigned during the Detailed Design phase. The role codes outlined in the following table are used in examples contained within the remainder of the document.

Code	Role Name	Role Description
SCHL	SCHOOL	School main campus or additional location as defined for Title IV funding.



Code	Role Name	Role Description
SCHO	SCHOOL OTHER	Role designation that serves to cover other School components not covered by the School role. An example would be an administrative office.
SSRV	SCHOOL SERVICER	Organization that provides numerous services to Schools in the delivery of financial aid. Specifically in relation to FSA, a School Servicer acts on behalf of the School to submit records to COD, NSLDS, etc. This organization is also referred to as a third party servicer.
LNDR	LENDER	Financial institution providing educational loan funds to students.
LSRV	LENDER SERVICER	Organization that provides numerous services to Lenders in the delivery of loan funds (i.e., Loan Certification letters, delinquency notices, etc.). This organization is also referred to as a third party servicer.
GRNT	GUARANTOR	Guaranteeing institution which provides administration of the Federal Family Education Loan (FFEL) Program.
GSRV	GUARANTOR SERVICER	Organization that provides numerous services to Guarantors in the processing of FFEL loans (i.e., systems support, guaranteeing loans, etc.). This organization is also referred to as a third party servicer.
PCA	PRIVATE COLLECTION AGENCY	Private agency contracted by FSA to administer many of the collection activities on the defaulted loans within the portfolio.
STAT	STATE AGENCY	Agency that provides leadership and coordination between institutions of higher education within a particular state.
FED	FEDERAL AGENCY	Federal agency outside of FSA that interacts with FSA for business purposes (i.e., Internal Revenue Service, Health and Human Services, Department of Treasury, etc.).
AUDT	AUDITOR	Certified Public Accountants (CPAs) or other independent professionals who are engaged to perform work that includes inquiries into compliance with applicable laws and regulations, efficiency and economy of operations, or overall achievement of a program's goals.
OWNR	OWNER	Role designation that serves to cover the designator for an organization that owns another organization.
GRPR	GROUPING	Role designation that serves to provide an anchor point for all grouping relationships. A RID with only grouping roles associated with it is considered to be a "roll-up" entity that has no physical existence. Roll-up entities are created primarily for the satisfaction of internal reporting needs.

Table 8 – Trading Partner Role Types

4.4.1.4 TRADING PARTNER LEGACY IDENTIFIER

The TRADING PARTNER LEGACY IDENTIFIER entity describes the information concerning the numerous other identifiers an organization may have accumulated in conducting business with FSA. The TRADING PARTNER LEGACY IDENTIFIER entity maintains information on these identifiers for current and historical perspectives.



Each legacy identifier is associated to a particular Trading Partner role. Thus the unique identifying information of the entity includes the inherited keys from the TRADING PARTNER ROLE entity. In addition to the inherited attributes, the entity requires the Legacy Identifier Type Code attribute and a Start Date to uniquely identify each occurrence of a legacy identifier.

Additional attributes in the TRADING PARTNER LEGACY IDENTIFIER entity include the Legacy Identifier attribute that contains the actual legacy identifier value. Transaction Start Date, Transaction Start User ID, End Date, Transaction End Date, and the Transaction End User ID attributes complete the entity.

4.4.1.5 TRADING PARTNER LEGACY IDENTIFIER TYPE

This entity describes the valid types of legacy identifiers used within the FSA enterprise for Trading Partners. These identifiers include program identifiers such as FFEL, DL, Pell, Campus Based, etc. or external identifiers such as the Integrated Postsecondary Education Data System (IPEDS) Unit ID. Additional legacy identifier types may be added as necessary in the future. The following table describes the currently documented identifiers. The legacy identifier codes presented are for illustrative purposes only and are designed for readability. Actual codes will be assigned during the Detailed Design phase of the RID component. The legacy identifier codes outlined in the following table are used in examples contained within the remainder of the document.

Code	ID Name	Legacy Identifier Description
OPEID	OFFICE OF POSTSECONDARY EDUCATION (OPEID) ID	Office of Postsecondary Education identifiers for a School (also referred to as School/Branch Code).
DL	DIRECT LOAN (DL) ID	Unique program identifier for Schools participating in the Federal Direct Loan Program.
PELL	PELL ID	Unique program identifier for Schools participating in the Federal Pell Grant Program.
FFEL	FEDERAL FAMILY EDUCATIONAL LOAN (FFEL) ID	Unique program identifier for Schools participating in the Federal Family Education Loan Program (FFEL).
FSC	FEDERAL SCHOOL CODE (FSC)	Unique program identifier assigned to Schools participating in Title IV programs (also referred to as Title IV Code).
LID	LENDER ID (LID)	Unique program identifier assigned to approved lending institutions participating in the Federal Family Education Loan Program (FFEL).
GA	GUARANTY AGENCY (GA) CODE	Unique identifier assigned to guaranty agencies (GAs).
STA	STATE AGENCY CODE	Unique identifier assigned to State Agencies.
PCA	PRIVATE COLLECTION AGENCY (PCA) CODE	Unique identifier assigned to Private Collection Agencies (PCAs).



Code	ID Name	Legacy Identifier Description
IPEDS	INTEGRATED POSTSECONDARY EDUCATION DATA SYSTEM (IPEDS) UNIT ID	Unique identifier assigned within the Integrated Postsecondary Education Data system to: baccalaureate or higher degree granting institutions, two-year award institutions, and less-than-two-year institutions.
ECB	ELECTRONIC CAMPUS BASED (ECB) ID	Unique identifier assigned to institutions applying for and participating in Campus Based funding programs.

Table 9 – Legacy Identifier Types

Certain legacy identifiers were explicitly excluded from this entity. Namely, an organization's Tax Identification Number (TIN), Data Universal Numbering Scheme (DUNS) Number, and GAPS Award Number including the Sequence Number will be captured within the Profile/Demographic subject area or the Program subject area of TPM. For more information on the various subject areas of TPM, please refer to Section 4.5.1 – Trading Partner Management System Integration. The TIN, DUNS Number, and GAPS Award Number are identifiers that are required for ongoing use by certain FSA Trading Partners. As a result, they will not be considered for retirement and will always be maintained within the Legacy Identifier Crosswalk. For more information on the Legacy Identifier Crosswalk, please refer to Section 9.1.3 – Legacy Identifier Crosswalk and RID Storage.

Another identifier not listed in the above list is the TG Number used for Student Aid Internet Gateway (SAIG) access. This identifier is directly related to a Trading Partner's ability to conduct electronic information exchange with FSA rather than related to actually identifying the Trading Partner. Therefore, it is possible for a Trading Partner to have more than one TG Number. To that end, the replacement of this identifier will not occur via the assignment of a single RID to a particular Trading Partner entity, but rather through a combination of access management and external technologies that are implemented as a result of the Data Strategy initiative. Until this identifier is retired it will be tracked via the Program subject area of TPM and will be maintained within the Legacy Identifier Crosswalk. For more information on the Legacy Identifier Crosswalk, please refer to Section 9.1.3 – Legacy Identifier Crosswalk and RID Storage.

4.4.1.6 TRADING PARTNER RELATIONSHIP

The TRADING PARTNER RELATIONSHIP entity describes the second key concept of the logical data model, that of relationships between Trading Partner roles. The relationships are established by identifying a pair of Trading Partner role occurrences. These occurrences may be between distinct RIDs or the same RID (assuming it has multiple roles). For more information on the currently defined relationship types, please refer to the description of the TRADING PARTNER RELATIONSHIP TYPE entity in Section 4.4.1.7 – TRADING PARTNER RELATIONSHIP TYPE.

As stated, a pair of Trading Partner roles uniquely identifies each relationship. As inherited from the TRADING PARTNER ROLE entity, this requires a combination of three foreign keys



for each role, namely the RID, the Trading Partner Role Code, and the Trading Partner Role Start Date. In addition, a Relationship Type Code and Start Date complete the creation of the entity's compound primary key.

The identified Trading Partner roles to be joined in a relationship are identified as either a *primary* or *secondary* role. The terms primary and secondary are generic to permit interpretation depending on the specific type of relationship. In relationship instances that imply a hierarchy, the primary role assumes the parent and the secondary assumes the child within the hierarchy.

Additional attributes in the TRADING PARTNER RELATIONSHIP entity include the Transaction Start Date, Transaction Start User ID, End Date, Transaction End Date, and the Transaction End User ID attributes. As with previous entities, these attributes define the period of time in which the relationship is valid and support the concept of effective dating.

Finally, there are several basic rules that must be satisfied in the creation and maintenance of relationships. These rules are summarized below:

- Active relationships may not be tied to one or more roles that are no longer active (i.e., has an end date that has passed).
- The same two Trading Partner roles may be associated with multiple relationships if the relationship types are distinct.
- Two identical relationships may not exist. That is, the same relationship type associating two identical roles in the same manner.
- Two roles may not be associated with identical relationship types with the only distinction being the positioning of primary and secondary. This inversion will result in a circular relationship (e.g., owner owns the owned who owns the owner).
- A relationship must be terminated, or ended, if one or both of the participating roles are terminated.

4.4.1.7 TRADING PARTNER RELATIONSHIP TYPE

The TRADING PARTNER RELATIONSHIP TYPE entity describes the valid types of relationships within the FSA enterprise for Trading Partners. Through the high-level functional requirements collection and logical data model development effort, an initial list of relationship types has been created. This list can be found towards the end of this section in Table 10 – Trading Partner Relationship Types. It is important to note that additional relationship types may be added as necessary.

Relationships may be as simple or as complex as desired. Relationships should be captured according to the business need and business value in capturing and representing the information. Relationships required by regulation (e.g., main/additional locations) must be captured within the RID component. Other relationships that may increase FSA's ability to effectively manage the delivery of Title IV funds may be captured as well. These relationships may be more difficult to accurately maintain, however. For example, some School owner relationships are extremely complex and difficult to capture/maintain since this information



may not be readily provided to FSA during the Trading Partner Enrollment process or the Recertification process. Such relationships, however, would deliver high value in dealing with individual debarments as their relationship to other entities could be easily understood.

The recommendation for implementation of relationships is to begin with a minimal set required to conduct ongoing activities. Once the management and application of these relationships is fully embraced, additional relationships may be added to increase the value to the business users.

In general, there are two distinct primary categories of relationships existing among the FSA Trading Partners, business relationships and grouping relationships. First, business relationships modeled after existing external relationships compose the majority of the relationship population. On further classification, these business relationships may either be of a hierarchical or associative nature. Examples of hierarchical relationships include the main/additional location relationship of Schools or the owner/owned type relationship. Associative relationships do not contain hierarchy, but rather a linkage of Trading Partners such as a customer and supplier. Examples of the associative relationships include the Lender/Lender Servicer or the School/School Servicer relationships. Second, grouping relationships created to group a number of seemingly unrelated Trading Partners together for the purpose of analytics and reporting make up the remainder of the relationship population. As mentioned previously, grouping relationships may also be referred to as roll-up relationships. Examples of grouping relationships include grouping all branches of Brown University that currently have no business tie to one another, or grouping all Guarantors that are serviced by the same Guarantor Servicer.

The following table documents the relationship types captured to date. It should be noted that since relationships might exist among nearly any combination of role types, an effort was made to specify the relationship types in a generic manner that could be adapted to the roles joined by the relationship. The relationship codes presented are for illustrative purposes only and are designed for readability. Actual codes will be assigned during the Detailed Design phase of the RID component. The relationship codes outlined in the following table are used in examples contained within the remainder of the document.

Code	Relationship Name	Relationship Description
OWNR	OWNER/OWNED	An owner/owned relationship. The owner role shall be listed as the primary and the owned as the secondary.
HIERCH	TIER ONE/TIER TWO	A tier one/tier two relationship represents a hierarchical relationship. Most commonly used with School Trading Partners to represent the main/additional location relationship. In this relationship, the tier one Trading Partner assumes the primary role.
CST	CUSTOMER/SUPPLIER	A customer/supplier relationship is created when the relationship is based on the exchange of goods or services. Examples include Servicer (i.e., School, Lender, or Guarantor) relationships. In this relationship, the customer assumes the primary role.
GRP	GROUPING	Associating a GRP role to any other type of role creates a grouping relationship. The GRP role will assume the primary role.



Code	Relationship Name	Relationship Description
ABSRB	ABSORBED	The absorbed relationship is used exclusively to create a permanent marker to identify the occurrence of an Absorption Change of Affiliation. In this relationship, the absorber assumes the primary role.
SPLT	SPLIT	The split relationship is similar to the absorbed in that it creates a marker of normally untraceable events. For Change of Affiliation events where a role becomes a new Trading Partner, the split relationship type would be used. In this relationship, the original entity assumes the primary role.

Table 10 – Trading Partner Relationship Types

Notably absent from the above relationships are Report/Attending and Funding/Attending relationships necessary for program funding. These relationships are currently contained within COD and are distinct by program (e.g., Direct Loan versus Pell). After analysis of these two specific relationships, it was determined that they would best be captured within the Program subject area of TPM since this is the subject area that will maintain program participation information. Within this area, the RID will serve as an attribute of each instance of a of a particular Trading Partner's program participation. For example, if a School were involved in both the Pell and the Direct Loan Programs the RID of the School would be an attribute of both the Pell program participation information and the Direct Loan program participation information.

The absorbed relationship is unique in its application and interpretation. An Absorption Change of Affiliation occurs when one Trading Partner role completely absorbs another, with no retention of the identity. Without creating this relationship, the absorbed Trading Partner role would simply terminate with no further information on its fate. Absorbed relationships are unique in that they exist for only a point in time, not a period (i.e., start and end dates are identical).

Grouping relationships also deserve special mention, as they will be especially useful internally to FSA in the creation of groupings of seemingly unrelated Trading Partner roles. There are several examples of grouping relationships that have been created within the FSA enterprise for purposes of reporting. Lender groups, for example, are maintained within PEPS exclusively for the purpose of reporting. All of the existing grouping relationships could be easily transferred into the RID component with minimal effort. For more information related to the initial start up of the RID component, please refer to Section 9.2 – Data Clean Up & Initial Start Up.

4.5 Model Integration with FSA Enterprise

As part of the iterative design approach used to develop the logical data model for the High-Level Design, the data model was developed against a conceptual model of the envisioned TPM. This was necessary to solidify scope and direction for the RID component data model in addition to exercising the model against various business scenarios. As the RID ERD was developed, a scoping activity drew the boundaries around what is included within the RID component, namely identifying Trading Partners, their roles, and the relationships their roles



have with other Trading Partner roles versus what is not included within the RID component, namely, additional profile/demographic information or program eligibility information.

Additionally, the logical data model for the RID component was compared against the COD system to ensure there are no inconsistencies or incompatibilities between what is currently maintained in relation to the Common School ID (i.e., RID) created by COD and what will be maintained in relation to the RID created by the RID component in the future.

The following sections provide more information on the integration of the logical data model for the RID into TPM and the comparison of the logical data model for the RID component to the existing COD system.

4.5.1 Trading Partner Management System Integration

In creation of the RID logical data model it was important to capture, at a conceptual level, how the other information within TPM might be related to and supported by the core RID component information. The following figure illustrates a conceptual view of a partial data model for TPM in its entirety.

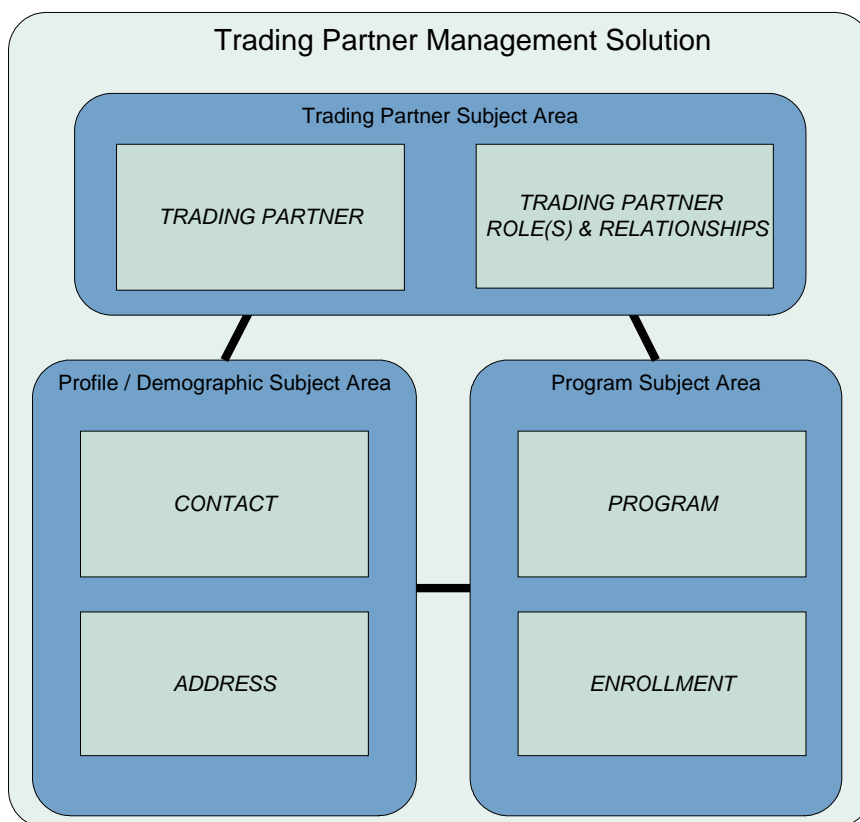


Figure 8 – Conceptual TPM Partial Data Model

This model, although obviously partial and at a high level, begins to demonstrate how the RID and Trading Partner information would be related to other information contained within TPM.



As an example, consider the Profile/Demographic subject area. This subject area would contain information related to a Trading Partner's descriptive information such as key address and contact information. Such information is outside the scope of the RID component, but stored within the greater context of TPM.

An additional example is the Program subject area. This is the subject area where information concerning the Trading Partner's participation in FSA programs and services would reside. Relationships between Trading Partner roles and the programs and services offered by FSA would be captured in this subject area along with the associated detailed attribute information. As mentioned previously, reporting and funding relationships would be stored within this subject area.

It is also important to note the interdependencies of the subject areas as the holistic solution for TPM is designed. For example, a role or relationship end date reached within the RID component would potentially have to trigger events within other areas of TPM. These linkages will be identified during the Detailed Design activities of TPM.

4.5.2 Common Origination & Disbursement (COD) Comparison

This section of the RID component High-Level Design details the comparison of the proposed RID and TPM logical data models against the COD system as it pertains to School entity information. This comparison was performed to ensure compatibility at the data layer, which will prevent mapping or translation difficulties during the implementation of the RID component. Assured compatibility will be critical to the overall success of TPM in its entirety.

COD currently maintains the sole repository of Common School IDs (i.e., RIDs) within the enterprise and the application of this functionality is exclusive to COD. Within COD, these identifiers are only assigned to School entities. The unique RIDs are used to establish and maintain School identification information as well as program participation and relationship information. In COD, the relationships are mapped primarily for program funding and reporting purposes. The RID logical data model includes COD's School specific data requirements while also encompassing data requirements for other Trading Partners including Lenders, Lender Servicers, Guaranty Agencies, etc. There are three COD tables that primarily support the COD generated RIDs. These are the School General Information, School System Identifier, and School Program Relations tables.

The School General Information table contains, among other things, the RID, the current OPEID and the previous OPEID, the School Name, and the Main Campus ID. These data elements map into the RID data model, specifically into the Trading Partner and Trading Partner Legacy Identifier tables. For the purposes of the RID component, the role of School will be assumed for the institutions appearing in COD tables. The roles will also have beginning and end dates in the RID component to enable enhanced relationship management, tracking and historical reporting. The RID, corresponding OPEID, and Trading Partner Name will be tracked by the RID component and stored within the enterprise solution for storing all Trading Partner related



data (i.e., Common Data Architecture). COD will access this data to determine general Trading Partner information.

In addition to the aforementioned data elements, the School General Information table contains the Title IV Approval Indicator, the Closed Date, and the GAPS Award Sequence Number. These program participation, School eligibility, and financial information data elements and indicators will be tracked and maintained within the Profile/Demographic or Program subject areas of TPM, along with additional demographic/profile information and program information. The Title IV Approval Indicator, Closed Date, and GAPS Award Sequence Number will be tracked within TPM and stored within the enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture). COD will access this data to determine Title IV eligibility information for funding and for reporting purposes.

The following table provides a partial picture of the School General Information table. The data elements highlighted will be specifically tracked by the RID component while the remaining data elements will be tracked by either the Profile/Demographic or Program subject areas of the TPM. Please note that all information contained within the table is for illustrative purposes only.

School General Information							
<i>RID</i>	<i>OPEID</i>	<i>Previous OPEID</i>	<i>School Name</i>	<i>Title IV Approval</i>	<i>Closed Date</i>	<i>Main Campus ID</i>	<i>GAPS Award Seq #</i>
11111111	00175900		School A	Y		11111111	1234
22222222	00175901		School B	Y		11111111	

Table 11 – COD School General Information Table

The School System Identifier table contains, among other things, the Program Identifier Type and Program Identifier (i.e., DL and Pell legacy identifiers) of Schools. These data elements map into the RID data model, specifically into the Trading Partner Legacy Identifier table. The RID, Legacy Identifier Type Code, and Legacy Identifier will be tracked by the RID component and stored within the enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture). COD will access this data to determine the legacy identifiers associated with a particular School for funding and reporting purposes.

The following table provides a partial picture of the School System Identifier table. The data elements highlighted will be specifically tracked by the RID component. Please note that all information contained within the table is for illustrative purposes only.



School System Identifier		
<i>RID</i>	<i>Identifier Type</i>	<i>Identifier</i>
11111111	DL	G01759
11111111	PELL	001759
22222222	DL	E00606

Table 12 – COD School System Identifier Table

The School Program Relations table contains, among other things, the RID and the Program code (i.e., Direct Loan or Pell). These data elements map into the RID data model, specifically into the Trading Partner and Trading Partner Legacy Identifier tables. As mentioned previously, the RID, Legacy Identifier Type Code, and corresponding Legacy Identifier will be tracked by the RID component and stored within the enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture). COD will access this data to determine the legacy identifiers associated with a particular School for funding and reporting purposes.

In addition to the aforementioned data elements the COD Program Relationships table contains the Reporting School ID, the Funding School ID, the Allow Drawdown Flag, and the System Generated Drawdown Flag data elements. These program participation and financial information data elements and indicators will be tracked and maintained within the Profile/Demographic or Program subject areas of TPM, along with additional demographic/profile information and program information. The Reporting School ID, the Funding School ID, the Allow Drawdown Flag, and the System Generated Drawdown Flag will be tracked within the TPM and stored within the enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture). COD will access this data to determine for funding and for reporting relationship information as well as financial information.

The following table provides a partial of the School Program Relations table. The data elements highlighted will be specifically tracked by the RID component while the remaining data elements will be tracked by either the Profile/Demographic or Program subject areas of the TPM. Please note that all information contained within the table is for illustrative purposes only.



School Program Relations					
<i>RID</i>	<i>Program</i>	<i>Reporting School ID</i>	<i>Funding School ID</i>	<i>Allow Drawdown Flag</i>	<i>System Generated Drawdown Flag</i>
11111111	DL	11111111	11111111	Y	N
22222222	DL	11111111	22222222	Y	N
11111111	PL	11111111	11111111	Y	N

Table 13 – COD School Program Relations Table

The following tables provide a representation of how similar information presented within the COD tables above would appear within the RID component. A Trading Partner's RID, its corresponding role(s), legacy identifiers, and relationships with other Trading Partner roles are stored within four main entities of the RID component. Please note that all information contained within the following tables is for illustrative purposes only.

The TRADING PARTNER entity tracks and maintains the RID, Trading Partner Name, Start Date, Transaction User ID, and Transaction Start Date. While each field is not depicted in the table below, this information will be tracked and maintained within this entity. This information will be stored within the Common Data Architecture. Therefore, not only will COD have access to it but this information will be readily available to other systems within the FSA enterprise as necessary.

Trading Partner		
<i>RID</i>	<i>Trading Partner Name</i>	<i>Start Date</i>
11111111	School A	7/1/72
22222222	School B	7/1/78

Table 14 – RID Component TRADING PARTNER ENTITY Extract

The TRADING PARTNER ROLE entity includes the RID, Role Code, Start Date, Transaction Start Date, Transaction Start User ID, End Date, Transaction End Date, Transaction End User ID, Trading Partner Role Name, and Relationships Indicator. While each field is not depicted in the table below, this information will be tracked and maintained within this entity. Such information will be stored within the Common Data Architecture and will allow COD and other systems to determine the role of the Trading Partner, the date the role was established and/or retired, and whether the role has relationships with roles of other Trading Partners. A role's begin and end dates are critical to historical reporting, analysis, and the accurate portrayal of a Trading Partner before and after a Change of Affiliation transaction.



Trading Partner Role			
<i>RID</i>	<i>Role Code</i>	<i>Start Date</i>	<i>End Date</i>
11111111	SCHL	7/1/72	
22222222	SCHL	7/1/78	

Table 15 – RID Component TRADING PARTNER ROLE Entity Extract

The TRADING PARTNER LEGACY IDENTIFIER entity contains the RID, Role Code, Role Start Date, Start Date, Legacy Identifier Type Code, Legacy Identifier, Transaction Start Date, Transaction Start User ID, End Date, Transaction End Date, and Transaction End User ID. While each field is not depicted in the table below, this information will be tracked and maintained within this entity. Such information will be stored within the Common Data Architecture and will allow COD and other systems to cross-reference a RID to its corresponding legacy identifiers and vice versa.

Trading Partner Legacy Identifier						
<i>RID</i>	<i>Role Code</i>	<i>Role Start Date</i>	<i>Start Date</i>	<i>Legacy ID Type Code</i>	<i>Legacy ID</i>	<i>End Date</i>
11111111	SCHL	7/1/72	7/1/72	OPEID	00175900	
22222222	SCHL	7/1/78	7/1/78	OPEID	00175901	
11111111	SCHL	7/1/72	7/1/72	DL	G01759	
11111111	SCHL	7/1/72	7/1/72	PELL	001759	
22222222	SCHL	7/1/78	7/1/78	DL	E00606	

Table 16 – RID Component TRADING PARTNER LEGACY IDENTIFIER Entity Extract

The TRADING PARTNER RELATIONSHIP entity contains the Primary RID, Primary Trading Partner Role Code, Primary Role Start Date, Secondary RID, Secondary Trading Partner Role Code, Secondary Role Start Date, Relationship Type Code, Start Date, Transaction Start Date, Transaction Start User ID, End Date, Transaction End Date, and Transaction End User ID. While each field is not depicted in the table below, this information will be tracked and maintained within this entity. Such information will be stored within the Common Data Architecture and will allow COD and other systems to obtain a holistic picture of the relationships a particular Trading Partner or group of Trading Partners is involved in.



Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
11111111	SCHL	7/1/72	22222222	SCHL	7/1/78	M/AL	7/1/78	

Table 17 – RID Component TRADING PARTNER RELATIONSHIP Entity Extract

4.6 Logical Data Model Detail Design Considerations

The RID High-Level Design is a starting point for the creation of a Detail Design. The process of creating a Detailed Design would include further refinement of the logical data model to address additional detailed requirements, performance considerations, etc.

As an example, the proposed logical data model specifies several large compound keys. In practice, such key structures should be avoided for performance reasons. An alternate key structure may be modeled in the detail design phase consistent with the practices adopted for TPM modeling activities. The alternate key structure may include the use of a surrogate key to reduce the size of the entities' primary key.

Another example entails the creation of additional database objects for increased performance. One such object would be views. Views are database objects that provide a composite view of data within the underlying objects. It would be likely, for example, that views would be created to represent specific populations of roles, relationships, or legacy identifiers. The view is constructed logically by the execution of a query within the database. The advantage of the view would be that a reduced result set would need to be queried against for normal operations.

Finally, depending on the chosen reporting access methods and tools, it may be necessary for the model to be altered to best accommodate the final solution. In addition to the creation of additional database objects, additional attributes may be added to further specify states of the given entities.



5 High-Level Processes

This section of the High-Level Design for the RID component describes at a high-level the core processes that the proposed solution must fulfill. Core solution processes will ensure proper functioning of the High-Level Logical Data Model; the core solution processes standardize the population and maintenance of data located within the model.

The core processes for the RID component are triggered in one of the following ways:

- Through the Trading Partner Enrollment processes
- Through a request from an FSA approved staff member

The first trigger, the Trading Partner Enrollment processes, is discussed within the Enrollment High-Level Design (Deliverable 123.1.28). Every new Trading Partner entity must go through the Trading Partner Enrollment process and Schools must periodically go through the Trading Partner recertification process, a shortened version of the Enrollment process. Both of these formal processes are intended to collect information about the Trading Partner, and determine the nature of the Trading Partner's business with FSA, including eligibility to participate in Title IV programs.

The Enrollment High-Level Design (Deliverable 123.1.28) presents a separate Business Activity Diagram for each type of Trading Partner. Each diagram illustrates how a Trading Partner would interact with the Trading Partner Enrollment component of TPM. These interactions include initial enrollment in the FSA enterprise and making changes to existing enrollment data, including completing the recertification process. Each diagram calls for the RID component to generate and assign initial RIDs/OPEIDs (or other appropriate legacy identifiers) or to generate and assign additional RIDs/OPEIDs (or other appropriate legacy identifiers). The core processes presented in the following pages provide a more detailed breakdown of the calls to the RID component referenced within the Enrollment High-Level Design (Deliverable 123.1.28).

The other trigger, a request from an FSA approved staff member, requires the definition of who qualifies as an FSA approved staff member. Once the RID component is implemented into the FSA enterprise, it will be necessary to have staff members who are directly responsible for maintaining it. These individuals must be empowered to initiate several processes including but not necessarily limited to:

- Requesting the generation and assignment of RIDs and their corresponding role(s) and legacy identifiers for new Trading Partners
- Adding roles and/or legacy identifiers to existing Trading Partners
- Adding and/or modifying relationships for new and/or existing Trading Partners

The specific delegation and standards regarding the division of these duties must be established in greater detail during the Detailed Design phase of the RID component or the Detailed Design



phase for TPM in its entirety. Once the division of these duties is determined and the appropriate staff members are identified and approved by FSA, they will be authorized to access the RID component, according to the access management rules governing TPM.

The high-level process illustrated in the following figure, Figure 9 – High-Level RID Component Processes, illustrates the major steps involved in populating and maintaining the RID component logical data model. Each oval symbol represents a single core process.

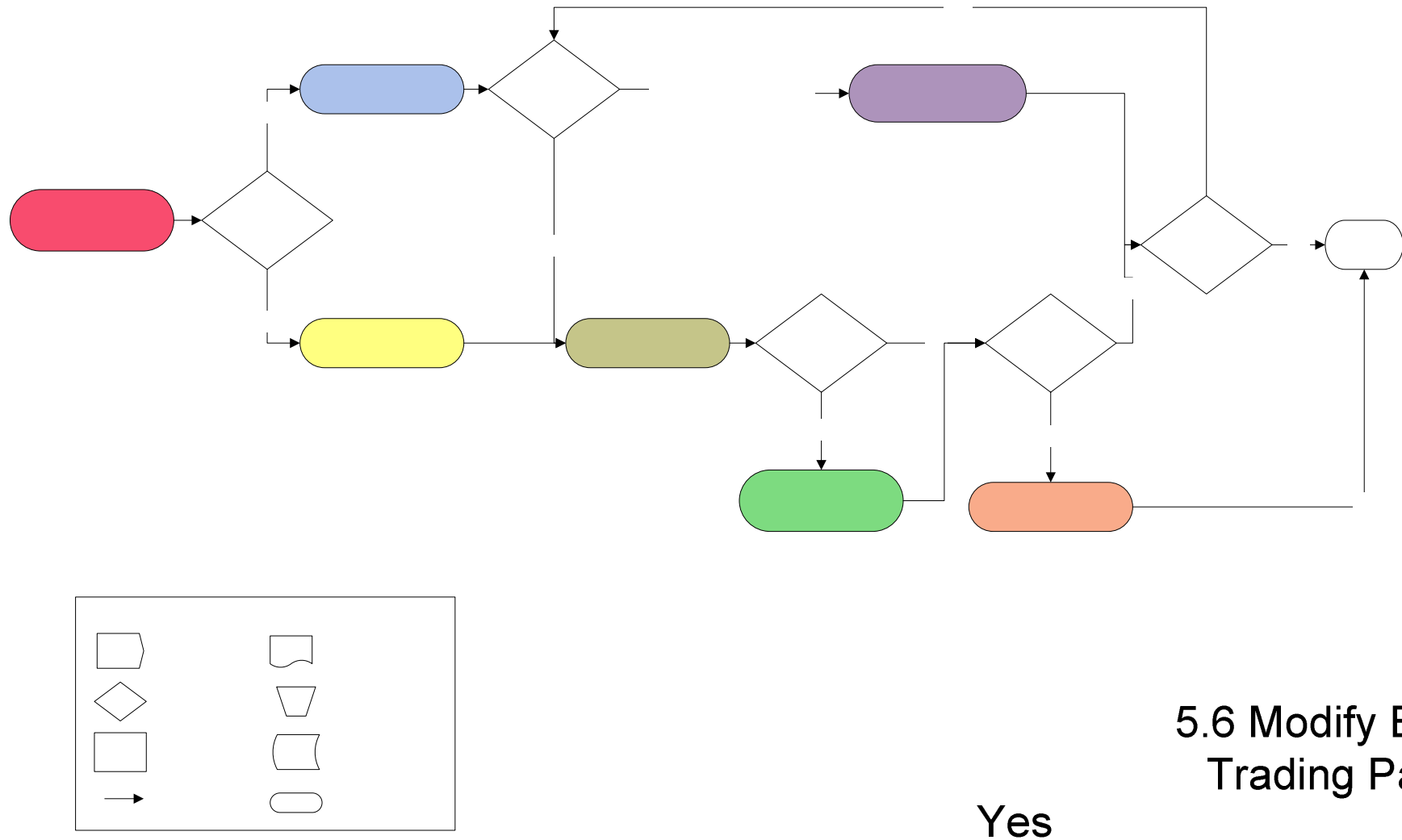


Figure 9 - High-Level RID Component Processes



As can be seen from the figure above, the procedure for populating and maintaining the RID component logical data model begins with the determination as to whether the request pertains to a new Trading Partner or one already existing in the enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture). New Trading Partners must receive a generated RID and have any corresponding Trading Partner role(s), legacy identifier(s) and relationships added if necessary. Existing Trading Partners can make modifications to their Trading Partner Name, their roles, legacy identifiers and/or relationships.

In all there are seven core processes involved in the procedure for populating and maintaining the RID component logical data model. As mentioned previously, these core processes are indicated by an oval symbol in the figure above. The seven core processes are as follows:

- Receive Request from New or Existing Trading Partner
- Generate and Assign Routing ID
- Add Trading Partner Role(s)
- Add Trading Partner Legacy Identifier(s)
- Assign Trading Partner Relationship(s)
- Modify Existing Trading Partner
- Modify Existing Trading Partner Relationship(s)

The following sections provide an illustration of each of these core processes, describe the high-level detail around the steps involved in each, and explain how they relate to one another.



5.1 Receive Request from New or Existing Trading Partner

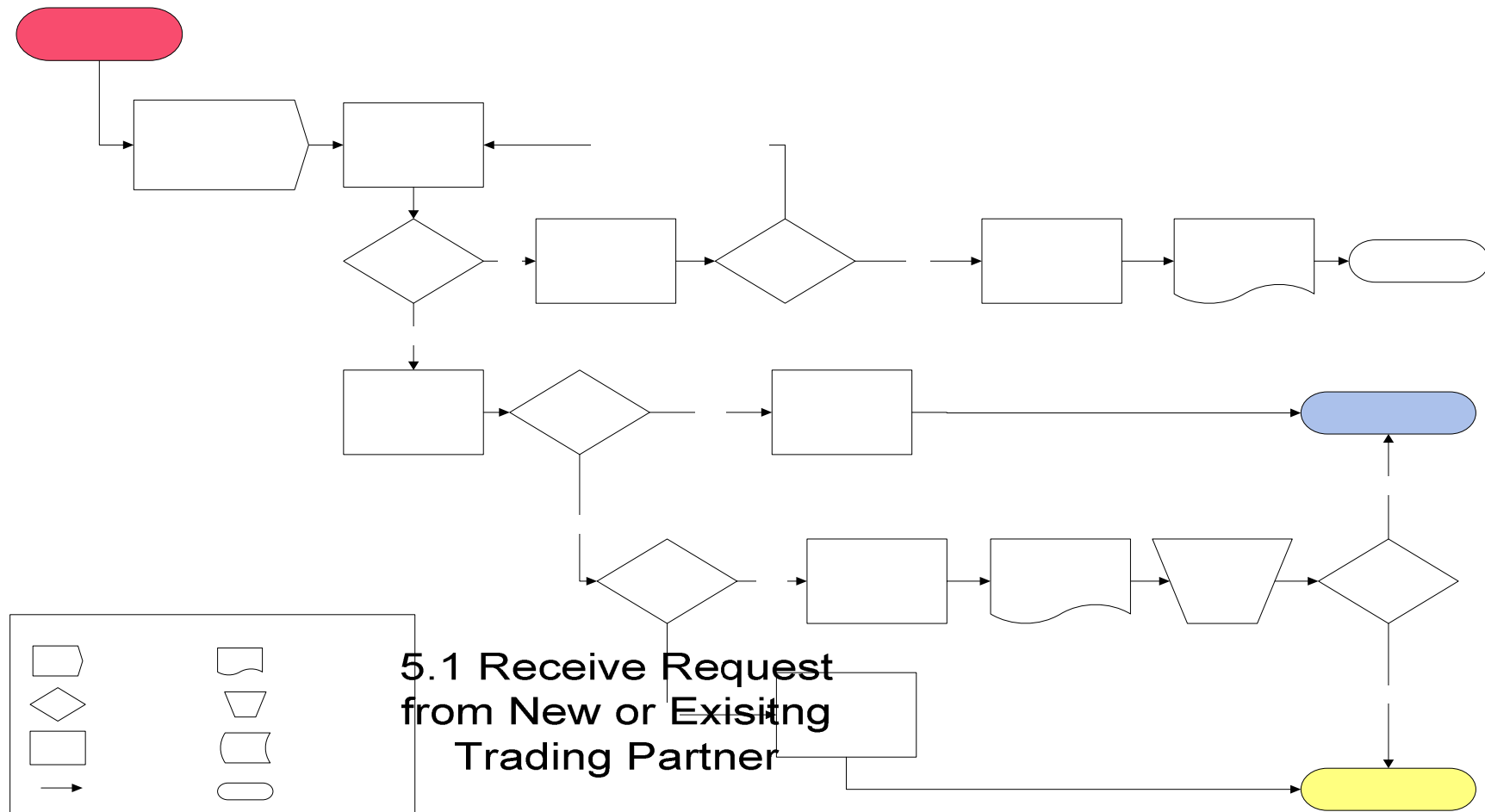


Figure 10 – Receive Request from New or Existing Trading Partner Process Flow



As mentioned previously, a new Trading Partner may be added to the enterprise through the Trading Partner Enrollment process, the Trading Partner Recertification process or through a request from FSA approved staff member. These are the only triggers that will initiate the addition of a Trading Partner to the enterprise.

Upon receipt, the request must contain all necessary information required to process the request. The required information will be fully defined during the Detailed Design phase of the RID component. If such necessary information has not been provided, the source will have additional opportunities to submit a complete request before an Invalid Request Error Report is created. The exact tolerance level for the additional submissions will need to be defined in the Detailed Design phase for RID the RID component. Once the request is determined complete, the Trading Partner's attributes are examined to determine if the Trading Partner already exists within the enterprise solution for storing all Trading Partner related data.

If the Trading Partner does exist, the request will be processed as a modification. For additional information on this process, please refer to Section 5.6 – Modify Existing Trading Partner.

If the system cannot determine conclusively whether the Trading Partner exists in the database containing all Trading Partner related information, the system will determine that an additional manual check is necessary and will indicate the Trading Partner on a report containing all Trading Partners that need manual validation. This report will list the Trading Partners who require verification of their status as an entirely new entity to the FSA enterprise. The validation of the Trading Partner may include conducting internal research or talking directly to the Trading Partner in question.

If, through the process of manual validation, the Trading Partner is found to exist within the enterprise solution for storing all Trading Partner related data, then the request will be processed as a modification. For additional information on this process, please refer to Section 5.6 – Modify Existing Trading Partner.

If the trading Partner is not found then the creation of a RID continues to process. For additional information on this process, please refer to Section 5.2 – Generate and Assign Routing ID.

If manual validation is not necessary, the creation of a RID continues to process. For more information on this process, please refer to Section 5.2 – Generate and Assign Routing ID.



5.2 Generate and Assign Routing ID

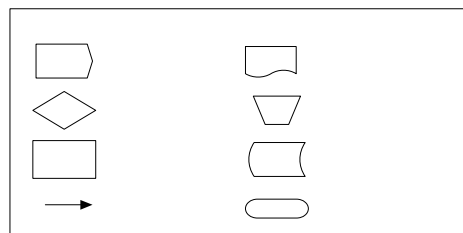
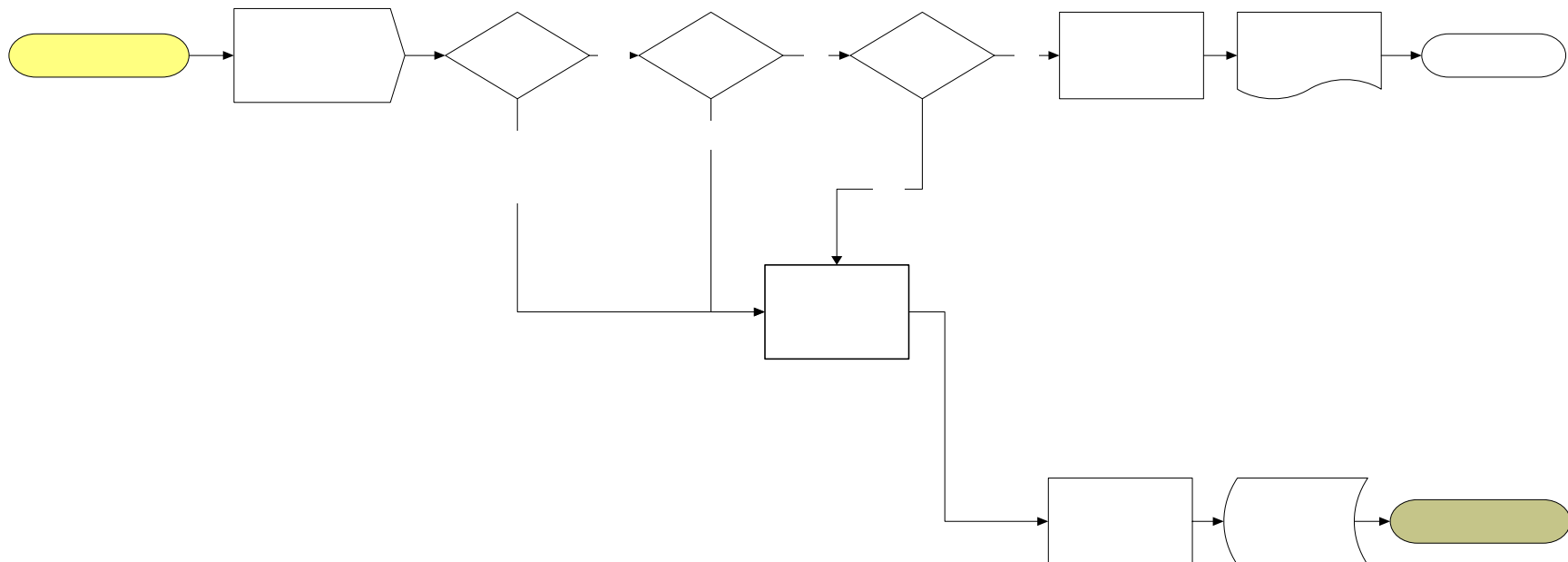


Figure 5.2 Generate and Assign Routing ID Process Flow

Request
Received is
Identified as a
Request to Add a
New Trading
Partner



Once a Trading Partner has been identified as new to the FSA enterprise, the system generates an eight-digit RID. Before the RID can be generated, however, the new Trading Partner's request must be valid. If the Trading Partner is a School, it must either be a main campus or indicate the main campus for which it is an additional location. Failure to supply this information will result in the request being written to an Invalid Request Error Report. Valid Schools and all other Trading Partners are then deemed eligible to receive a RID.

As soon as a Trading Partner is deemed eligible to receive a RID, the system will generate the RID and verify that the RID created is unique to the enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture). Once the RID is verified as unique, the system will assign the RID to the valid Trading Partner. This RID and other pertinent data, such as Trading Partner Name, are stored in the TRADING PARTNER entity; the RID is stored as the key attribute within the TRADING PARTNER entity.

If the RID generated in this process is found to not be unique, the record will be marked for exception processing and the duplicate RID will not be assigned to the Trading Partner. The specific steps of the exception processing will be defined in the Detailed Design phase of the RID component.



5.3 Add Trading Partner Role(s)

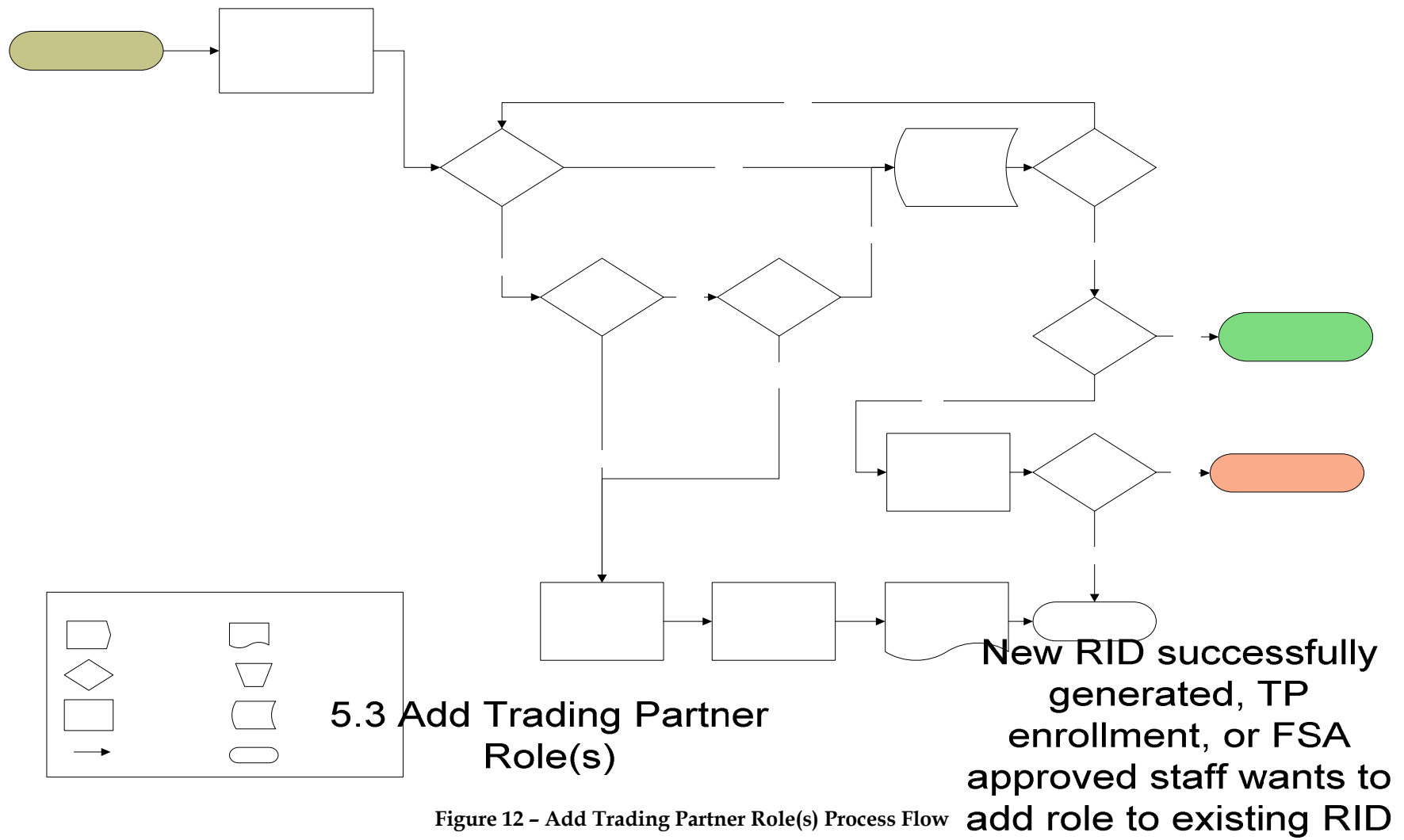


Figure 12 - Add Trading Partner Role(s) Process Flow



Every Trading Partner who receives a RID must be assigned at least one role. Roles can only be assigned to a Trading Partner if a RID has been successfully generated and assigned. Roles may be added to both new and existing Trading Partners.

Before adding a role, the system must determine if that role already exists for the Trading Partner in another instance. Trading Partners can be included in multiple grouping roles (e.g., University of Maryland can belong to a public university group as well as Schools in Maryland group). A Trading Partner cannot, however, have duplicate roles of any other type. For example, if University of Maryland already has a School role, it cannot receive an additional School role.

An attempt to add a duplicate, non-grouping role will result in the request being written to a Duplicate Role Request Error Report. Similarly, a Trading Partner cannot be a member of the same grouping role more than once (e.g., University of Maryland cannot exist twice in a public university group). The system generates a Duplicate Role Request Error Report if an attempt is made to add a Trading Partner multiple times to the same grouping role.

The system stores role additions to the TRADING PARTNER ROLE entity when the role request is determined valid. This process may be repeated for each additional role type that must be added.

Once all roles have been added, legacy identifiers should be added when required. Grouping roles do not require legacy identifiers. After grouping roles have been added, the Trading Partner's assigned RID is communicated to Trading Partner Enrollment process or the FSA staff member who initiated the request. Grouping roles can then proceed to assign relationships, if necessary. For additional information on this process, please refer to Section 5.5 – Assign Trading Partner Relationship(s).

Non-grouping roles must add legacy identifiers. For additional information on this process, please refer to Section 5.4 – Add Trading Partner Legacy Identifier(s).



5.4 Add Trading Partner Legacy Identifier(s)

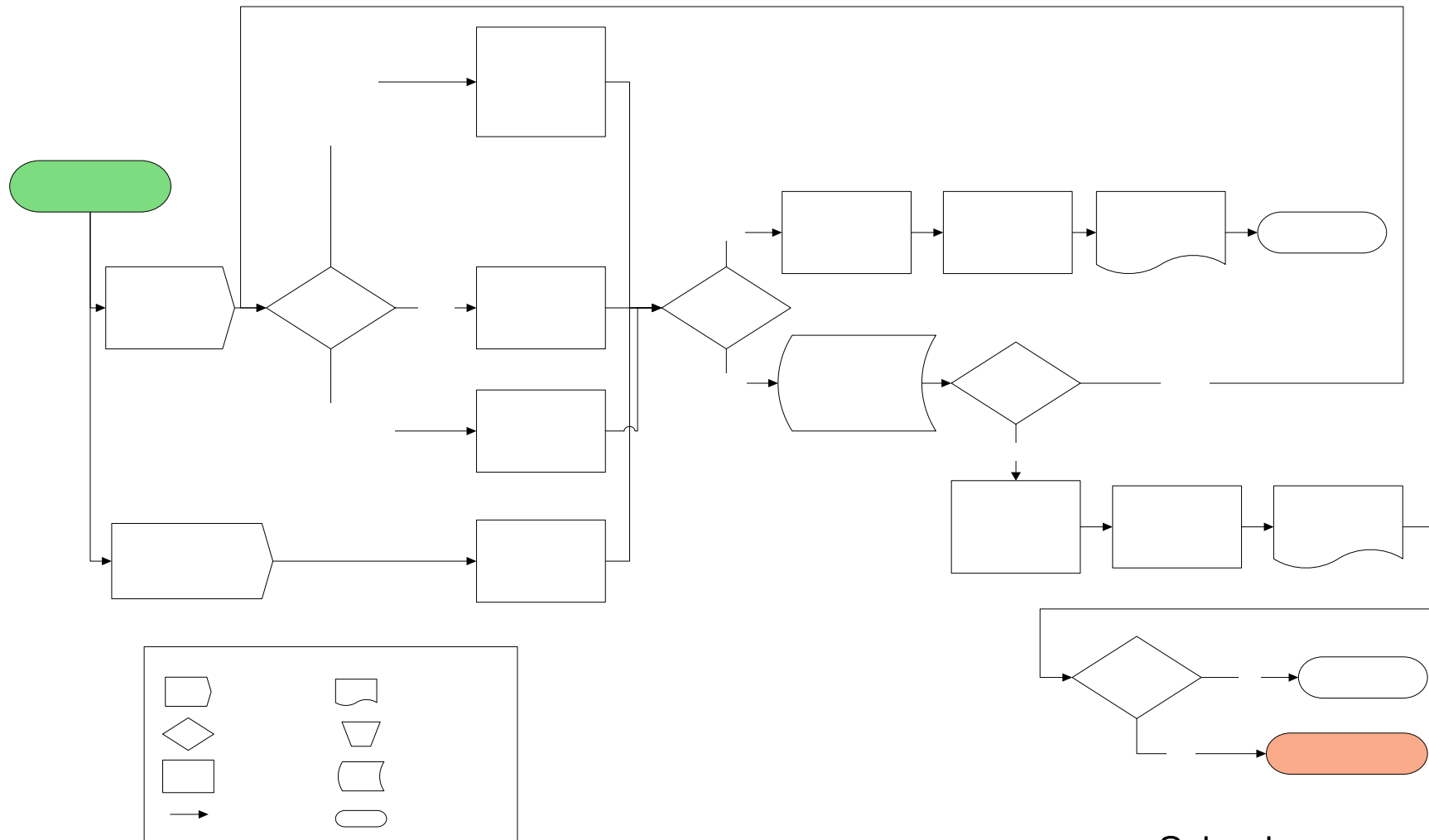


Figure 13 - Add Trading Partner Legacy Identifier(s) Process Flow

School,
School Servicer,
Guarantor, or
Guarantor
Servicer



Legacy identifiers may be added to a Trading Partner's role following the successful addition of a new role to the Trading Partner.

The system will determine what type of role was added to the Trading Partner:

- A state agency, Lender, or Lender Servicer role results in a request to FMS to generate the Trading Partner's associated legacy identifier.
- A private collection agency (PCA) role results in a request to Common Services for Borrowers (CSB) to generate the Trading Partner's associated legacy identifier.
- A School, School Servicer, Guarantor, or Guarantor Servicer role results in a request for Trading Partner Management (TPM) to call for the generation of the appropriate legacy identifier(s).

An approved member of the FSA staff may also request to add a legacy identifier manually to a role already existing for a particular Trading Partner.

Following the successful generation of a legacy identifier, the RID, Trading Partner Role Code, Legacy Identifier and other relevant data will be stored in the TRADING PARTNER LEGACY IDENTIFIER entity and the Legacy Identifier Crosswalk. The RID remains the key attribute. For information related to the Legacy Identifier Crosswalk, please refer to Section 9.1.3 – Legacy Identifier Crosswalk and RID Storage.

This process may continue repeatedly until each all legacy identifiers for each Trading Partner role have been requested and successfully added to the TRADING PARTNER LEGACY IDENTIFIER entity and the Legacy Identifier Crosswalk.

Once all required legacy identifiers have been generated, the RID and necessary Legacy Identifiers, such as the OPEID, are communicated to Trading Partner Enrollment process and the FSA approved staff member who initiated the request. Successful processing will result in the item appearing on the Successful Processing of Trading Partners Report. If no relationships are necessary for the Trading Partner, the process concludes. If any of the roles of a particular Trading Partner require relationships, the system will continue to process the Trading Partner. For additional information on this process, please refer to Section 5.5 – Assign Trading Partner Relationship(s).



5.5 Assign Trading Partner Relationship(s)

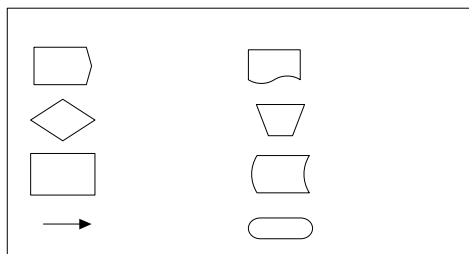
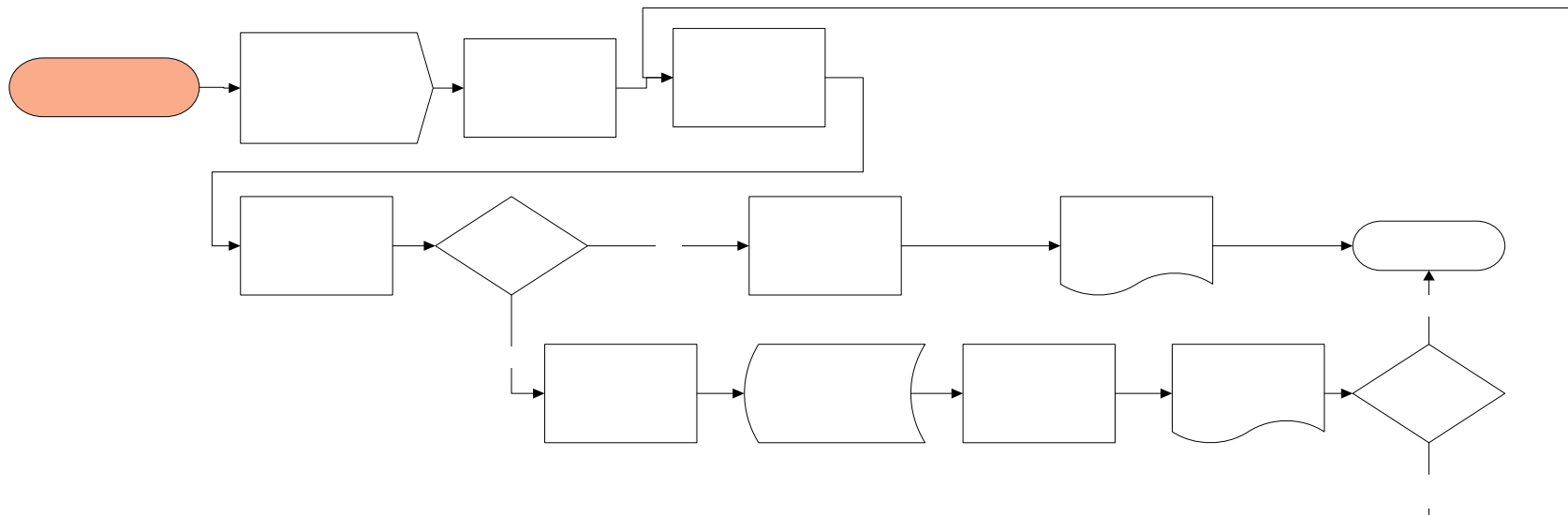


Figure 14 – Assign Trading Partner Relationship(s) Process Flow

Request Received
from Trading
Partner Enrollment
processes or FSA
Approved Staff



Some newly added Trading Partner roles require a relationship to be assigned with a role of another Trading Partner. For example, a Lender Servicer role may be added to a Trading Partner. Such a role requires the establishment of a relationship with the Lender being serviced by the Trading Partner.

If the new role necessitates a relationship with another Trading Partner, relationships should be indicated during the Trading Partner Enrollment or Recertification processes. Additionally, FSA approved staff may add a role that requires a relationship; therefore, the staff may also request the creation of such a relationship.

There are two distinct types of relationships that may be created in this process: grouping relationships and business relationships. Business relationships are established between Trading Partner roles that have a direct business relationship with one another. Grouping relationships are created to group a number of seemingly unrelated Trading Partners together for the purpose of analytics and reporting. Both business and grouping relationships are considered valid relationships in this process.

The system determines the Primary and Secondary RIDs for the roles of the Trading Partners involved in the relationship, as well as the validity of the relationship based on the information submitted. The terms primary and secondary are generic to permit interpretation depending on the specific type of relationship. In relationship instances that imply a hierarchy, the primary role assumes the tier one position and the secondary role assumes the tier two position. For additional information related to the Primary and Secondary Trading Partner RIDs in each of the various relationship types, please refer to Section 4.4.1.7 – TRADING PARTNER RELATIONSHIP TYPE.

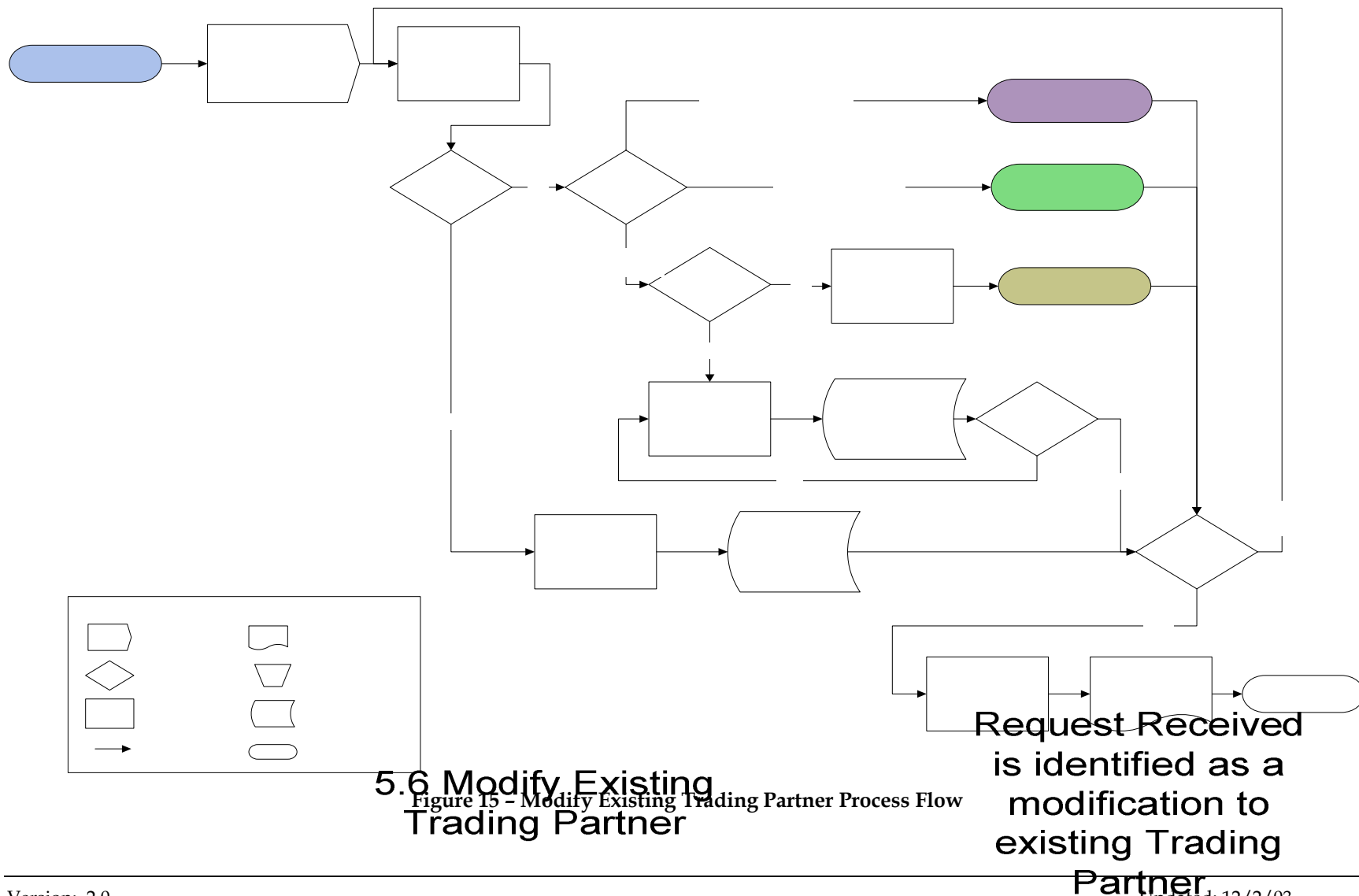
If the relationship requested is not valid, the request will be written to a Relationship Error Report. For example, a request to create a relationship with a role that is no longer active would be deemed invalid and written to the Relationship Error Report.

If the relationship requested is valid, a relationship will be established between the particular roles of the two Trading Partners involved in the relationship. It is important to note that it is possible for a relationship to be established between two roles of a single Trading Partner. An example of this would be if a single Trading Partner contained a role of a School and a School Servicer and the School Servicer role was responsible for servicing the School role. The primary RID and secondary RID and other relevant data for all successfully created relationships will be stored in the TRADING PARTNER RELATIONSHIP entity and reported in the Relationships Created Successfully Audit Report.

As necessary, this process can be repeated for each additional relationship that is added to the primary RID.



5.6 Modify Existing Trading Partner





During a Trading Partner's lifetime within the FSA enterprise, attributes of the Trading Partner may change. In such instances, the system will first determine the type of change or changes being requested.

A request for a Trading Partner name change will be processed first and saved to the enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture). Any other modification requests will follow the change in the Trading Partner name. Other Trading Partner modifications include:

- **Modification of a Role**
If the Trading Partner Role modification involves the ending of a role, the system will process and store the expiration of the role and corresponding legacy identifier(s) and relationships. For information on changes to existing roles, please refer to Section 5.3 – Add Trading Partner Role(s).
- **Modification of a Relationship**
For information on Trading Partner relationship modifications, please refer to Section 5.7 – Modify Existing Trading Partner Relationship(s).
- **Addition of a Legacy Identifier**
For information on the addition of legacy identifiers, please refer to section 5.4 – Add Trading Partner Legacy Identifier(s).

Upon completion of the first modification or addition to existing Trading Partners, the system will process any additional request to the existing Trading Partner. Once all requested modifications have processes, the system will produce a report detailing the Trading Partner modifications made.



5.7 Modify Existing Trading Partner Relationship(s)

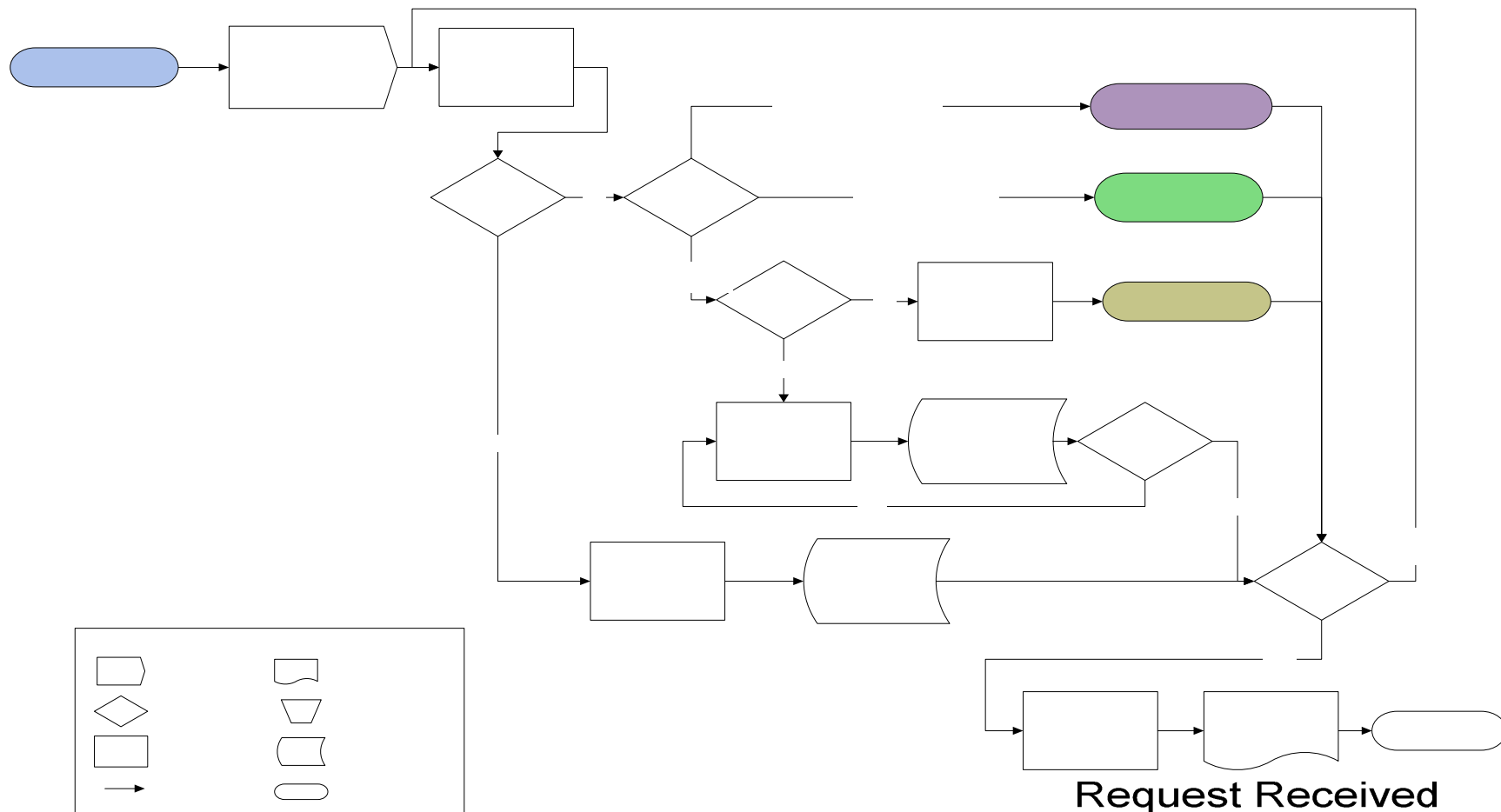


Figure 16 – Modify Existing Trading Partner Relationship(s) Process Flow

5.6 Modify Existing Trading Partner

**Request Received
is identified as a
modification to
existing Trading
Partner**



Some existing Trading Partner roles require a relationship to be modified with the role of another Trading Partner. For example, a relationship between a School and a School Servicer would require modification if the two Trading Partners no longer do business together. Such a change in business relations requires the modification of a relationship with the School and the School Servicer.

Changes and modifications to relationships should be indicated through the Trading Partner Recertification process that particular Trading Partners are required to go through at various intervals. A request for such a change could also be made by an FSA approved staff member. Once such a request is received, the system determines the primary and secondary RIDs for the roles of the Trading Partners involved in the relationship, as well as the validity of the relationship based on the information submitted.

If the relationship modification requested is not valid, the request will be written to a Relationship Modification Error Report. For example, a request to create a relationship with a role that is no longer active would be deemed invalid and written to the Relationship Error Report.

If the relationship requested is valid, the relationship will be modified to reflect the new circumstances between the two Trading Partners. The primary RID and secondary RID and other relevant data will be stored in the TRADING PARTNER RELATIONSHIP entity and reported in the Relationships Modified Successfully Audit Report.

It may also be possible in this process, to delete a grouping of Trading Partners, thereby eliminating all of their relationships as part of that group. For example, it may be necessary to delete the grouping of law Schools in the state of New York. Modifications to groupings would only be allowed to be made by FSA approved staff members.



6 Support of Change of Affiliation

This section of the High-Level Design for the RID component describes at a high-level the way in which the RID component will help to support Change of Affiliation requests. While the RID component is not difficult to envision in a steady state environment, FSA Trading Partners undergo frequent changes in affiliation. Change of Affiliation is a broad phrase referring to the changing relationships among Trading Partners. Relationship changes have direct implications to the distribution and management of Title IV funds. For this reason, the ability of the proposed solution to effectively handle the ebb and flow of Trading Partners is critical to its success and support of FSA's core mission.

Unlike FSA's current identifiers, the RID will provide a fixed reference point to a Trading Partner, regardless of its affiliation to other entities. This fixed reference point will provide business owners a clearer understanding of the impacts Change of Affiliation may have on their processes. The assumption is that while RID will help manage Change of Affiliation issues by tying the identifier to each Trading Partner entity rather than to a specific location, the RID initiative itself is not a business process change, but rather a tool that will help address current anomalies within existing business processes. As a result, separate re-engineering/re-examination efforts for some business processes will likely be necessary.

In the following pages, several Change of Affiliation scenarios have been identified and exercised against the proposed RID component logical data model. This activity was used during the model development to flush out model issues and reinforce key concepts with the audience. The following basic Change of Affiliation scenarios were examined:

- Scenario #1 - Location to Freestanding
- Scenario #2 - Merge/Consolidation
- Scenario #3 - Merge/Absorption
- Scenario #4 - Redesignation

These scenarios were intentionally simplified to illustrate the key concepts associated with each of the various Change of Affiliation types examined and are not intended to be an all encompassing examination of the different types of Change of Affiliation. Such an examination will need to occur during the Detailed Design phase of the RID component.

In each scenario, the Trading Partner is assumed to be homogenous and contain only one role. Thus the Trading Partner and its role are described with a single letter: 'A', 'B', 'C', etc.; where Trading Partner 'A' has a RID of '11111111,' 'B' has a RID of '22222222,' 'C' has a RID of '33333333,' etc. More complicated scenarios involving multiple roles will be presented following these basic examples.

In each of the scenarios, a description is provided of both the before and after environment. To illustrate the impact of the event to the data within the RID component, sample data has also



been provided. The sample data in the examples provided includes only the necessary attributes to accurately represent the scenarios.

6.1 Scenario #1 – Location to Freestanding

The Location to Freestanding scenario is perhaps the simplest and cleanest of all the Change of Affiliation types. In this scenario, the child entity disassociates itself with its parent and becomes a freestanding entity. The following diagram visually depicts this scenario.

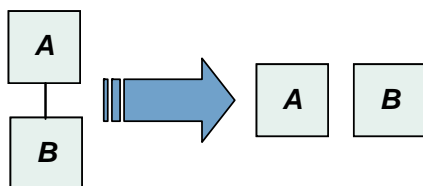


Figure 17 – Location to Freestanding

For School entities, this translates into an additional location becoming its own main campus. In the current environment, the newly designated main campus receives a new OPEID ending in a '00' suffix.

In the proposed RID component, this scenario would require a relationship modification of two pre-existing entities. More specifically, the relationship previously existing between the two entities would cease to be effective on a specified date.

The following table excerpts illustrate this scenario with sample data both prior to and after the Change of Affiliation has taken place. Please note that not all of the information maintained by each of the various entities (i.e., TRADING PARTNER, TRADING PARTNER ROLE, and TRADING PARTNER RELATIONSHIP) is displayed, but rather only the information necessary for this scenario. Trading Partner 'A' is represented by RID '11111111' and Trading Partner 'B' is represented by RID '22222222.' The Location to Freestanding Change of Affiliation became effective on 4/30/00.

Trading Partner		
RID	Trading Partner Name	Start Date
11111111	School A	7/1/72
22222222	School B	7/1/78

Trading Partner Role			
RID	Role Code	Start Date	End Date
11111111	SCHL	7/1/72	
22222222	SCHL	7/1/78	



Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
11111111	SCHL	7/1/72	22222222	SCHL	7/1/78	M/AL	7/1/78	

Table 18 – Scenario #1 – Prior to Location to Freestanding Change of Affiliation

In this scenario, the Change of Affiliation would be accomplished by updating the TRADING PARTNER RELATIONSHIP entity to reflect the termination of the relationship. The update would consist of populating the Relationship End Date attribute with a date/timestamp of when the relationship should be effectively ended. This data would remain in the entity for historical purposes. The following tables detail the modifications necessary as a result of the Location to Freestanding Change of Affiliation. The modifications are highlighted.

Trading Partner		
RID	Trading Partner Name	Start Date
11111111	School A	7/1/72
22222222	School B	7/1/78

Trading Partner Role			
RID	Role Code	Start Date	End Date
11111111	SCHL	7/1/72	
22222222	SCHL	7/1/78	

Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
11111111	SCHL	7/1/72	22222222	SCHL	7/1/78	M/AL	7/1/78	4/30/00

Table 19 – Scenario #1 – After Location to Freestanding Change of Affiliation

6.2 Scenario #2 – Merge/Consolidation

A Merge/Consolidation Change of Affiliation scenario involves the acquisition of one Trading Partner by another. In the process of the acquisition, the acquired entity retains its identity to FSA, unlike the situation of an absorption that will be covered in a subsequent scenario. The acquired Trading Partner may be either parent or child entity. For the purposes of this scenario, we considered the case where both entities are freestanding.

The following diagram visually depicts this scenario. Trading Partner ‘A’ acquires Trading Partner ‘B’, although in the process, Trading Partner ‘B’ retains its individual identify from FSA’s perspective.

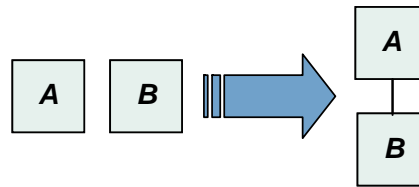


Figure 18 – Merge/Consolidation

For School Trading Partners, this translates into a main campus being moved to an additional location under another main campus. The newly designated additional location would receive a new OPEID under the main campus' OPEID. The addition location's previous OPEID would be retired.

In the proposed RID component, this scenario would require the creation of a relationship between two pre-existing Trading Partners. Since 'A' and 'B' had no established relationship prior to the Change of Affiliation event, the TRADING PARTNER RELATIONSHIP entity would not contain any data.

The following table excerpts illustrate this scenario with sample data both prior to and after the Change of Affiliation has taken place. Please note that not all of the information maintained by each of the various entities (i.e., TRADING PARTNER, TRADING PARTNER ROLE, and TRADING PARTNER RELATIONSHIP) is displayed, but rather only the information necessary for this scenario. Trading Partner 'A' is represented by RID '11111111' and Trading Partner 'B' is represented by RID '22222222.' The Merge/Consolidation Change of Affiliation became effective on 4/1/00.

Trading Partner			Trading Partner Role			
RID	Trading Partner Name	Start Date	RID	Role Code	Start Date	End Date
11111111	School A	7/1/72	11111111	SCHL	7/1/72	
22222222	School B	7/1/78	22222222	SCHL	7/1/78	

Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 20 – Scenario #2 – Prior to Merge/Consolidation Change of Affiliation

In this scenario, the Change of Affiliation would be accomplished by updating the TRADING PARTNER RELATIONSHIP entity to reflect the creation of the relationship. The following



tables reflect the information required to establish this relationship. The changed/new information is highlighted.

Trading Partner			Trading Partner Role			
RID	Trading Partner Name	Start Date	RID	Role Code	Start Date	End Date
11111111	School A	7/1/72	11111111	SCHL	7/1/72	
22222222	School B	7/1/78	22222222	SCHL	7/1/78	

Trading Partner Relationship								
			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
11111111	SCHL	7/1/72	22222222	SCHL	7/1/78	M/AL	4/1/00	

Table 21 – Scenario #2 – After Merge/Consolidation Change of Affiliation

6.3 Scenario #3 – Merge/Absorption

A Merge/ Absorption Change of Affiliation scenario involves the acquisition of one Trading Partner by another. Unlike the Merge/Consolidation scenario covered previously, the acquisition process results in the acquired entity losing its identity as a distinct Trading Partner to FSA. In the case of a Merge/ Absorption Change of Affiliation, the acquiring or acquired Trading Partner may be either parent or child entity. For the purposes of this scenario, the case where both entities are freestanding was considered. The following diagram visually depicts this scenario. Trading Partner A acquires Trading Partner B and in the process, Trading Partner B will no longer be recognized as a separate entity by FSA.

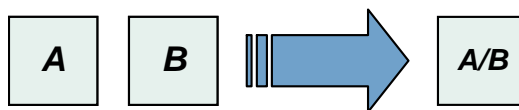


Figure 19 – Merge/Absorption

For School Trading Partners, the result is the retirement of the OPEID for the Trading Partner who is acquired and no apparent impact on the acquirer's OPEID.

In order to maintain a record of such a transaction, the proposed RID component includes the concept of absorption relationships. The absorption relationship creates a physical linkage between the two Trading Partners. This relationship will capture the absorption for historical purposes.



In the proposed RID component, this scenario would require the creation of a relationship between two pre-existing Trading Partners. Since 'A' and 'B' had no established relationship prior to the Change of Affiliation event, the TRADING PARTNER RELATIONSHIP entity would not contain any data.

The following table excerpts illustrate this scenario with sample data both prior to and after the Change of Affiliation has taken place. Please note that not all of the information maintained by each of the various entities (i.e., TRADING PARTNER, TRADING PARTNER ROLE, and TRADING PARTNER RELATIONSHIP) is displayed, but rather only the information necessary for this scenario. Trading Partner 'A' is represented by RID '11111111' and Trading Partner 'B' is represented by RID '22222222.' The Merge/Absorption Change of Affiliation became effective on 4/1/00.

Trading Partner		
RID	Trading Partner Name	Start Date
11111111	School A	7/1/72
22222222	School B	7/1/78

Trading Partner Role			
RID	Role Code	Start Date	End Date
11111111	SCHL	7/1/72	
22222222	SCHL	7/1/78	

Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 22 – Scenario #3 – Prior to Merge/Absorption Change of Affiliation

In the case of absorption, there are several key events occurring. First, as mentioned previously, a historical record of the absorption is captured via the creation of a relationship between the two Trading Partners. Second, since the absorbed Trading Partner loses its individual identity from the perspective of FSA, the associated Trading Partner role is ended. The following tables reflect the information required to represent this scenario. The changed/new information is highlighted.

Trading Partner		
RID	Trading Partner Name	Start Date
11111111	School A	7/1/72
22222222	School B	7/1/78

Trading Partner Role			
RID	Role Code	Start Date	End Date
11111111	SCHL	7/1/72	
22222222	SCHL	7/1/78	4/1/00



Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
11111111	SCHL	7/1/72	22222222	SCHL	7/1/78	ABSRB	4/1/00	4/1/00

Table 23 – Scenario #3 – After Merge/Absorption Change of Affiliation

Examining the sample data above, an important point is the date stamp applied to the relationship and the retirement of the Trading Partner role of the absorbed. In the case of a Merger/ Absorption, the relationship exists at a point in time rather than over a period of time. This serves to capture the relationship while maintaining integrity of the model. That is, relations may not exist if one or more of the roles bound by it are no longer active.

In fact, the following date stamps should be identical for each of the following attributes: Relationship Effective Date, Relationship End Date, and Trading Partner Role End Date. Also note that although not shown in the example data, the transaction dates (i.e., Relationship Transaction Effective Date, Relationship Transaction End Date, and Trading Partner Role Transaction End Date) would also be identical, although not necessarily the same as the previously stated dates.

6.4 Scenario #4 – Redesignation

A Redesignation Change of Affiliation scenario essentially involves two Trading Partners swapping positions in the relationship. Most commonly, this occurs with School Trading Partners who desire to maintain Title IV participation by swapping the additional location and main campus. In practice, a Redesignation Change of Affiliation causes a change of address of the original additional location to the main location (i.e., change of address from 'B' to 'A'), the loss of eligibility/approval of the original additional location (i.e., 'B' loses eligibility/approval), and the addition of a new location with the address of the original main location (i.e., 'C' is created with the address of 'A'). The following diagram visually depicts this scenario.

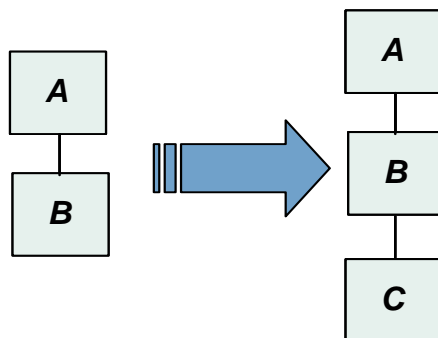


Figure 20 – Redesignation



In the proposed RID component, this scenario would require the retirement of one Trading Partner, the creation of a new Trading Partner, the retirement of one relationship, and the creation of another relationship.

The following table excerpts illustrate this scenario with sample data both prior to and after the Change of Affiliation has taken place. Please note that not all of the information maintained by each of the various entities (i.e., TRADING PARTNER, TRADING PARTNER ROLE, and TRADING PARTNER RELATIONSHIP) is displayed, but rather only the information necessary for this scenario. Trading Partner 'A' is represented by RID '11111111,' Trading Partner 'B' is represented by RID '22222222,' and Trading Partner 'C' is represented by RID '33333333.' The Redesignation Change of Affiliation became effective on 4/30/00.

Trading Partner		
RID	Trading Partner Name	Start Date
11111111	School A	7/1/72
22222222	School B	7/1/78

Trading Partner Role			
RID	Role Code	Start Date	End Date
11111111	SCHL	7/1/72	
22222222	SCHL	7/1/78	

Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
11111111	SCHL	7/1/72	22222222	SCHL	7/1/78	PCHLD	7/1/78	

Table 24 – Scenario #4 – Prior to Redesignation Change of Affiliation

The following tables reflect the information required to represent this scenario post-Redesignation Change of Affiliation. Two key events take place in this scenario. First, the existing relationship is terminated. Second, a new relationship is created that inverts the roles from the previous relationship. Note that since both roles still exist through the process, no changes were necessary to the TRADING PARTNER ROLE entity. The following tables reflect the information required to represent this scenario. The changed/new information is highlighted.

Trading Partner		
RID	Trading Partner Name	Start Date
11111111	School A	7/1/72
22222222	School B	7/1/78
33333333	School C	7/1/80

Trading Partner Role			
RID	Role Code	Start Date	End Date
11111111	SCHL	7/1/72	
22222222	SCHL	7/1/78	4/30/00
33333333	SCHL	7/1/80	



Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
11111111	SCHL	7/1/72	22222222	SCHL	7/1/78	PCHLD	7/1/78	4/30/00
11111111	SCHL	7/1/78	33333333	SCHL	7/1/72	PCHLD	4/30/00	

Table 25 – Scenario #4 – After Redesignation Change of Affiliation

6.5 Additional Change of Affiliation Scenarios

As stated previously, the above scenarios represent interactions of simple, homogenous Trading Partners. In reality, more complex Trading Partner structures will exist and must be examined in terms of a Change of Affiliation event. The current RID High-Level Design distinguishes between a Trading Partner and the roles associated with it. As such, role movement between Trading Partners must be considered. Examples of these scenarios are documented within this section. The scenarios at the role level parallel the basic Change of Affiliation scenarios presented above and are listed in the following table.

Scenario	Description
Role to Freestanding	Role associated with a Trading Partner disassociates itself with the Trading Partner. A new RID is created to represent the new Trading Partner and the role is associated with it.
Role Consolidation	Two Trading Partners with distinct roles merge. In this scenario, preservation of the original RIDs is preserved by associating the entities with a relationship.
Role Absorption	Absorption is the combination of two identical roles. In this scenario, a relationship marker is established indicating the absorption.

Table 26 – Additional Change of Affiliation Scenarios

The following more complex Change of Affiliation scenarios were examined:

- Scenario #5 – Role to Freestanding
- Scenario #6 – Role Consolidation
- Scenario #7 – Role Absorption

6.5.1 Scenario #5 – Role to Freestanding

The following figure visually depicts a Role to Freestanding Change of Affiliation scenario. Trading Partner ‘A’ divests itself of the Lender Servicer role that then becomes a new separate Trading Partner ‘B.’ In this scenario, it is also assumed that Lender ‘A’ also creates a relationship to the newly formed Lender Servicer ‘B.’

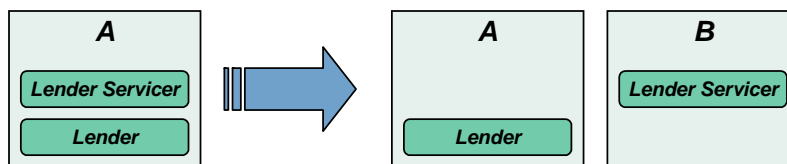


Figure 21 – Role to Freestanding (a)

In the proposed RID component, this scenario would require the creation of a new Trading Partner and a relationship linking the new Trading Partner's RIDs' role to its point of origin. This relationship is analogous to the Absorption type relationship.

The following table excerpts illustrate this scenario with sample data both prior to and after the Change of Affiliation has taken place. Please note that not all of the information maintained by each of the various entities (i.e., TRADING PARTNER, TRADING PARTNER ROLE, and TRADING PARTNER RELATIONSHIP) is displayed, but rather only the information necessary for this scenario. Trading Partner 'A' is represented by RID '11111111' and Trading Partner 'B' is represented by RID '22222222.' The Role to Freestanding Change of Affiliation became effective on 7/01/00.

Trading Partner		
RID	Trading Partner Name	Start Date
11111111	Company A	7/1/72

Trading Partner Role			
RID	Role Code	Start Date	End Date
11111111	LNDR	7/1/72	
11111111	LSRV	7/1/72	

Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
11111111	Lender	7/1/72	11111111	LSRV	7/1/72	CST	7/1/72	

Table 27 – Scenario #5 – Prior to Role to Freestanding Change of Affiliation

It is noteworthy that this example also shows a relationship existing internal to a single RID. That is, a relationship between the Lender and Lender Servicer roles has been established to show the business relationship between the two roles.

The following tables reflect the post Change of Affiliation environment. Unlike the original Location to Freestanding Change of Affiliation scenario, the before environment only contains one RID and requires the creation of a new RID. The key point of this scenario is to properly record the origin of the new RID and associated role. To associate the newly created RID with its previous RID of origin, a Split relationship is created to mark the event. As in the case of a Merge/Absorption Change of Affiliation, the Split relationship is instantaneous and does not



extend for a period of time. Also note the second relationship that is created linking the Lender role or RID '1111111' to the Lender Servicer role of RID '2222222.' This relationship would be optional based on the assumption that the Lender continues to use the services of the Lender Servicer. The example assumes the Change of Affiliation event occurs on 7/1/00. The changed/new information is highlighted.

Trading Partner		
RID	Trading Partner Name	Start Date
1111111	Company A	7/1/72
2222222	Company B	7/1/00

Trading Partner Role			
RID	Role Code	Start Date	End Date
1111111	LNDR	7/1/72	
1111111	LSRV	7/1/72	7/1/00
2222222	LSRV	7/1/00	

Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
1111111	LNDR	7/1/72	1111111	LSRV	7/1/72	CST	7/1/72	7/1/00
1111111	LSRV	7/1/72	2222222	LSRV	7/1/00	SPLT	7/1/00	7/1/00
1111111	LNDR	7/1/72	2222222	LSRV	7/1/00	CST	7/1/00	

Table 28 – Scenario #5 – After Role to Freestanding Change of Affiliation

Although this was a simple situation and may not often occur in practice, it illustrates the key point that the newly created role/RID has a pointer, or relationship, to its origin. This maintains historical integrity of the data.

Expanding this scenario to show a broader picture, consider the following environment of Trading Partners, roles, and relationships. In this case, the Lender Servicer role is moved into a new Trading Partner (i.e., Trading Partner 'B') in addition to the associated relationships.

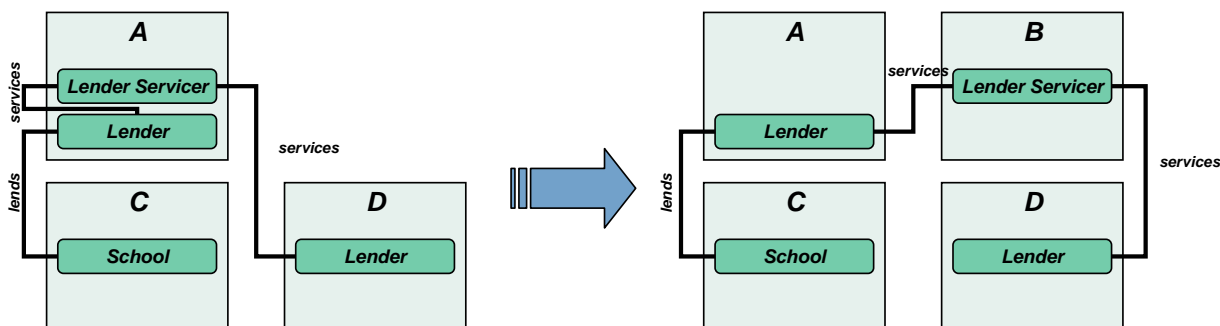




Figure 22 – Role to Freestanding (b)

Another possibility entails Trading Partner ‘A’ retaining its role as a Lender Servicer. In this case, the relationships change to reflect that Lender ‘D’ is no longer doing business with Lender Servicer ‘A,’ but rather Lender Servicer ‘B.’ This scenario, seen below, may or may not be considered a Role to Freestanding Change of Affiliation and will be determined by the business owner and the circumstances of the movements. If it is determined to be a Change of Affiliation rather than simply changing relationships, a marker relationship would be created linking the Lender Servicer in ‘B’ to the Lender Servicer role in ‘A’, thus establishing a historical reference that the role in ‘B’ originated from the role in ‘A.’

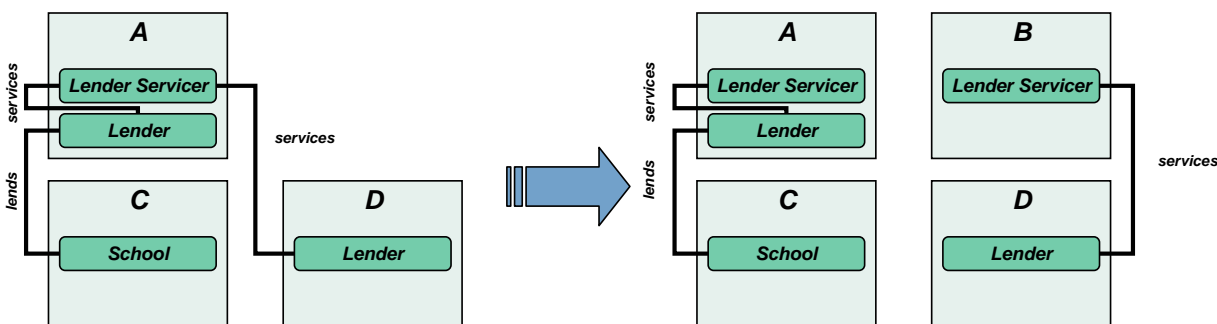


Figure 23 – Role to Freestanding (c)

6.5.2 Scenario #6 – Role Consolidation

A Role Consolidation Change of Affiliation follows similar rules as the basic Merge/Consolidation Change of Affiliation. That is, each Trading Partner identity is maintained. The following figure visually depicts this scenario.

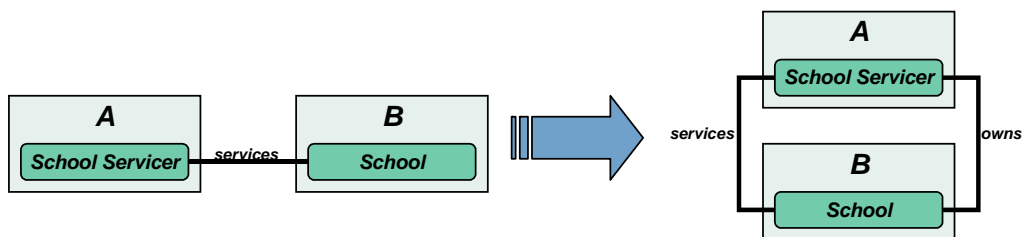


Figure 24 – Role Consolidation

Note the creation of two relationships between the School Servicer and School. The first relationship indicates the business relationship of the School Servicer servicing the School. The second relationship results from the Change of Affiliation event, in that the School Servicer has purchased the School.

The following table excerpts illustrate this scenario with sample data both prior to and after the Change of Affiliation has taken place. Please note that not all of the information maintained by each of the various entities (i.e., TRADING PARTNER, TRADING PARTNER ROLE, and



TRADING PARTNER RELATIONSHIP) is displayed, but rather only the information necessary for this scenario. Trading Partner 'A' is represented by RID '11111111' and Trading Partner 'B' is represented by RID '22222222.' The Role Consolidation Change of Affiliation became effective on 4/30/00.

Trading Partner		
RID	Trading Partner Name	Start Date
11111111	Company A	7/1/72
22222222	School B	7/1/78

Trading Partner Role			
RID	Role Code	Start Date	End Date
11111111	SCHL	7/1/72	
22222222	SSRV	7/1/78	

Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
11111111	SCHL	7/1/72	22222222	SSRV	7/1/78	CST	7/1/78	

Table 29 – Scenario #6 – Prior to Role Consolidation Change of Affiliation

The following tables reflect the information after the Change of Affiliation event. Note the presence of two relationships between the same Trading Partner roles. This is possible because each relationship is a distinct relationship type. As stated in the earlier relationship descriptions, it is not valid to have two relationships of the *same* type between the same Trading Partner roles. The following tables reflect the information required to represent this scenario. The changed/new information is highlighted.

Trading Partner		
RID	Trading Partner Name	Start Date
11111111	Company A	7/1/72
22222222	School B	7/1/78

Trading Partner Role			
RID	Role Code	Start Date	End Date
11111111	SCHL	7/1/72	
22222222	SSRV	7/1/78	

Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
11111111	SCHL	7/1/72	22222222	SSRV	7/1/78	CST	7/1/78	
22222222	SSRV	7/1/78	11111111	School	7/1/72	OWNR	4/30/00	



Table 30 – Scenario #6 – After Role Consolidation Change of Affiliation

6.5.3 Scenario #7 – Role Absorption

The final type of scenario at the role level is the case of a Role Absorption Change of Affiliation. A Role Absorption Change of Affiliation is defined as the combination of two identical roles associated with two distinct Trading Partners combining into a single role associated with a single Trading Partner. The following figures visually depict this scenario.



Figure 25 – Role Absorption (a)

The Role Absorption Change of Affiliation may also be combining a portion of a Trading Partner, thereby leaving the Trading Partner with its remaining roles.

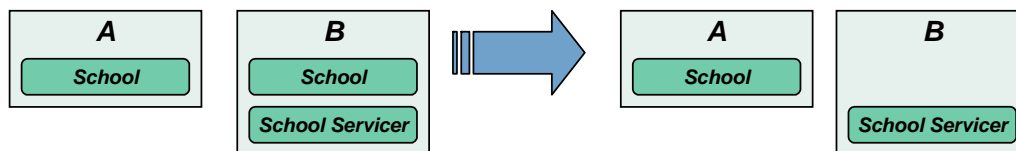


Figure 26 – Role Absorption (b)

The following table excerpts illustrate the scenario in Figure 26 – Role Absorption (b) with sample data both prior to and after the Change of Affiliation has taken place. Please note that not all of the information maintained by each of the various entities (i.e., TRADING PARTNER, TRADING PARTNER ROLE, and TRADING PARTNER RELATIONSHIP) is displayed, but rather only the information necessary for this scenario. Trading Partner ‘A’ is represented by RID ‘11111111’ and Trading Partner ‘B’ is represented by RID ‘22222222.’ The Role Absorption Change of Affiliation became effective on 4/1/00.

Trading Partner		
RID	Trading Partner Name	Start Date
11111111	School A	7/1/72
22222222	Company B	7/1/78

Trading Partner Role			
RID	Role Code	Start Date	End Date
11111111	SCHL	7/1/72	
22222222	SCHL	7/1/78	
22222222	SSRV	8/1/80	



Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role Code	Role Start Date	Type Code	Start Date	End Date
2222222	SCHL	7/1/78	2222222	SSRV	8/1/80	CST	8/1/80	

Table 31 – Scenario #7 – Prior to Role Absorption (b) Change of Affiliation

In the case of a Role Absorption Change of Affiliation, there are several key events occurring. First, as mentioned previously, a historical record of the absorption is captured via the creation of a relationship between the two Trading Partners. Second, the absorbed Trading Partner role ceases to exist. Finally, although not shown in this example, it is possible for a School/School Servicer relationship to be established between the remaining two roles if the business had decided to do so. The following tables reflect the information required to represent this scenario. The following tables reflect the information required to represent this scenario. The changed/new information is highlighted.

Trading Partner		
RID	Trading Partner Name	Start Date
1111111	School A	7/1/72
2222222	Company B	7/1/78

Trading Partner Role			
RID	Role Code	Start Date	End Date
1111111	SCHL	7/1/72	
2222222	SCHL	7/1/78	4/1/00
2222222	SSRV	8/1/80	

Trading Partner Relationship								
Primary			Secondary			Relationship		
RID	Role Code	Role Start Date	RID	Role	Role Start Date	Type	Start Date	End Date
2222222	SCHL	7/1/78	2222222	SSRV	8/1/80	CST	8/1/80	4/1/00
1111111	SCHL	7/1/72	2222222	SCHL	7/1/78	ABSRB	4/1/00	4/1/00

Table 32 – Scenario #7 – After Role Absorption (b) Change of Affiliation



7 Support of Effective Dating

This section of the High-Level Design for the RID component details the way in which the RID component will help to support the effective dating of changes to Trading Partner entities. The ability to maintain an accurate history of modifications made to Trading Partner entities within the solution is a critical feature of the RID component. This functionality is generally referred to as effective dating. Before describing how effective dating works within the RID component, a quick review of some key points is helpful.

As a note, all dates referred to in this High-Level Design imply a date and timestamp. Most modern relational databases have a "DATE" data type that accurately captures both time and date information within a single field. For simplicity purposes, references to the time portion of the date have been omitted from this document.

There have been two general types of dates described in this document: start dates and end dates. More specifically, the following dates are defined for reference:

- **Start Date** – Date/timestamp of the event's (role, relationship, etc.) effective starting date
- **Transaction Start Date** – Date/timestamp of when the start date was entered into the system
- **End Date** – Date/timestamp of the terminating event (role, relationship, etc.)
- **Transaction End Date** – Date/timestamp of when the end date was entered into the system

Finally, there are several basic integrity rules that must be followed within the system. They are as follows:

- Start date may not be after the end date
- Start date may be before, simultaneous, or after the transaction start date
- End date may be before, simultaneous, or after the transaction end date
- Start and transaction start date must not be null
- Transaction end date must not be null if end date is not null
- Dates shall be real dates; no placeholder dates shall be entered. If there is no date, then the field shall be left null.

With this background, an example best illustrates the concept of effective dating and how the logical data model, outlined within Section 4 – High-Level Logical Data Model, supports it. In this example, consider the case of a School closure. Since School closures are not always known to FSA prior to occurrence, having the ability to effectively "back date" the event in the system is required for the RID component to be effective. In this example, an actual School closure occurs on 6/30/03. Unfortunately, FSA does not learn of the School closure until 9/30/03, at which time it is entered into the system. The following timeline visually presents the scenario key events.

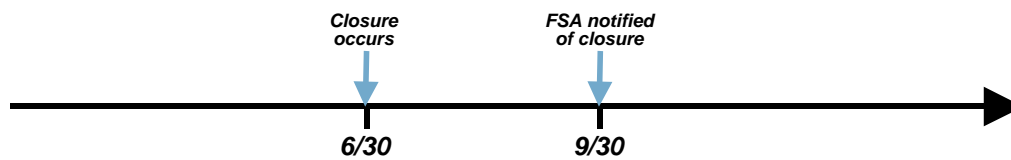


Figure 27 – School Closure Effective Dating Timeline

Because FSA does not learn of the closure until 9/30/03, it continues to conduct business with the institution as if it remained open. More specifically, the RID component is unaware of the closure and upon examination during the 6/30/03 to 9/30/03 timeframe, would reflect the School remaining open. Once the School closure is known and entered into the system, however, the treatment of the School changes and the appropriate business processes are executed.

The following figure, Figure 28 – School Closure Effective Dating Example, depicts this example and indicates the perspectives seen by each of the parties. Above the timeline represents the actual events, or the perspective of the School or other outside knowledgeable parties. The pre-closure timeframe is indicated by the light blue band and the post-closure timeframe is indicated by the dark blue band.

Below the timeline, represents the three perspectives that the RID component will present to FSA approved staff members. The three perspectives of FSA are tied to three distinct points in time: (1) pre-closure; (2) post-closure, but pre-FSA notification; and (3) post-FSA notification. The point of these three FSA perspectives illustrates how FSA perceives the current state. For example, during the post-closure/pre-FSA notification period, FSA still believes the School is open when in fact it is not.

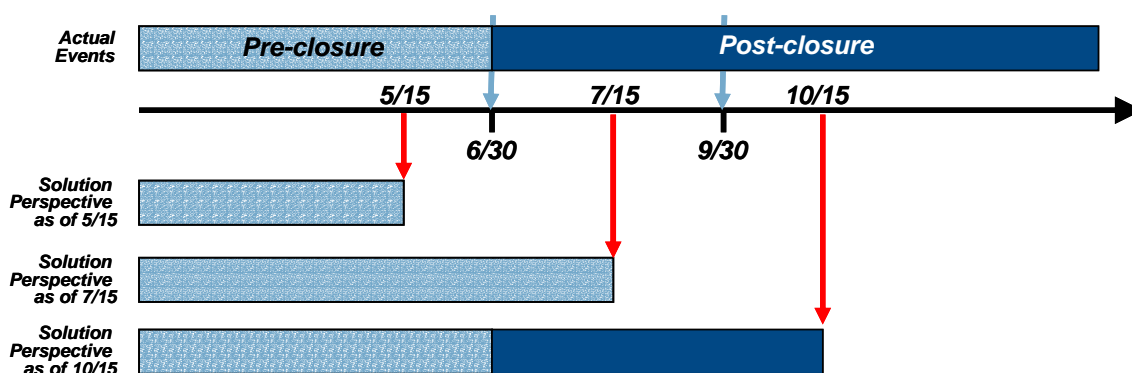


Figure 28 – School Closure Effective Dating Example

Now consider how this information would be represented within the RID component. As new information is received and populated into the solution, FSA gains new perspective on the situation. The following table extracts represent sample data taken from the system on 10/30/03.



Trading Partner		
RID	Trading Partner Name	Start Date
11111111	School A	7/1/72

Trading Partner Role					
RID	Role Code	Start Date	Txn Start Date	End Date	Txn End Date
11111111	SCHL	7/1/72	7/1/72	6/30/03	9/30/03

Figure 29 – School Closure Effective Dating RID Component Example Data

Given this data, the solution has the ability to create an accurate representation of the information for an “as-of” date. That is, by picking a date in the past, the solution has the ability to accurately recreate the perspective seen in the system at that time. The following table presents the three possible cases assuming the actual calendar date is 10/15/03.

Actual Date	As-of Date	Results
10/15/03	5/15/03	All data with a transaction end date after the “as-of” date would be ignored, thus the School would appear open.
10/15/03	7/15/03	All data with a transaction end date after the “as-of” date would be ignored, thus the School would appear open when in fact it was closed, even though FSA had yet to be notified.
10/15/03	10/15/03	All data with a transaction end date after the “as-of” date would be ignored, thus the School would appear to have closed effective 6/30/03.

Table 33 – Effective Dating Example Results

Note that although this concept could be applicable to all data within the solution, the choice of which data elements should be effectively dated should be made carefully, as storage requirements and performance issues will increase as more historical perspectives are retained. These issues will need to be examined and decisions about which elements should be effectively dated made during the Detailed Design phase of the RID component.



8 Support of Data Access

This section of the High-Level Design for the RID component describes at a high-level the way in which the RID component will help to support FSA approved staff members obtain access to the data that they need about a particular Trading Partner or group of Trading Partners. A main tenant of the RID component is to provide the ability to access data related to specific Trading Partners or groups of Trading Partners across the enterprise. Such data will be critical to creating analytical reports and performing necessary Trading Partner oversight functions. The RID component must enable FSA staff members to gain a holistic view of trading partner interactions throughout the enterprise. Having a holistic view of Trading Partner interactions throughout the enterprise will allow FSA to address and more accurately manage the fraud, waste and abuse findings of the Office of the Inspector General (OIG).

As mentioned previously, the RID component will include a user interface that enables FSA approved staff members to conduct ad hoc queries related to specific Trading Partners or groups of Trading Partners. These queries could be as simple as determining all of the relationships related to a particular Trading Partner role or potentially as complex as determining the cohort default rates for all campuses within the City University of New York (CUNY) system. In either case the RID or set of RIDs will serve as the key for pulling information from the enterprise solution for storing all Trading Partner related data (i.e., Common Data Architecture). Due to the use of effective dating within the RID component, queries on timeframes in the past will be possible.

The results of any query that is conducted will be presented in a user friendly manner that is easily understood by the FSA staff member conducting the query. In addition, the results will be able to be saved for future use and/or printed for immediate use. The specific details of this feature must be fully documented during the Detailed Design phase for the RID component or the Detailed Design Phase for TPM in its entirety.



9 RID Component Integration & High-Level Sequencing Approach

The purpose of this section of the High-Level Design of the RID component is to provide information on the high-level approach for the integration and implementation of the RID component into the FSA enterprise. It is important to note that the RID component will be implemented into the FSA enterprise at the same time TPM in its entirety is implemented. The following sections provide information specific to the implementation of the RID component including how it will be integrated into the enterprise, the data clean up and initial load that will be necessary prior to start up, and the high-level sequencing of the RID into the FSA enterprise. This approach will need to be considered as the implementation approach for the greater TPM as it is outlined.

9.1 RID Component Integration

Once developed, the RID component will need to be integrated into the FSA enterprise. The following sections provide high-level information on how the RID component fits into the target state vision for the FSA enterprise, the various legacy identifiers currently utilized by the existing legacy systems, how the RID component will translate between several of these legacy identifiers and the RID until all communication is done using only the RID, how Trading Partners will access the FSA enterprise, and how the RID might play into the Security and Access Management initiatives.

9.1.1 FSA Enterprise Target State Vision

In order to understand how the RID component will be integrated into the FSA enterprise, it is important to understand the future vision. The Data Framework Specification (Deliverable 123.1.4) outlines the vision for the future-state of the FSA enterprise. It documents the alignment of the enterprise into business processes rather than separate, siloed systems. It provides descriptions of the major Business Capability Areas: Application (i.e., Central Processing System functionality), Origination & Disbursement (i.e., Common Origination & Disbursement functionality), Trading Partner Management, Common Services for Borrowers (i.e., Direct Loan Servicing System, Direct Loan Consolidation System, Debt Management Collections System, and Conditional Death and Disability Tracking System functionality), Financial Management (i.e. Financial Management System functionality), Partner Payment Management, and Enterprise Analytics and research (i.e., National Student Loan Data System and other enterprise-wide analytical functionality).

Trading Partner Management (TPM) will be responsible for Trading Partner Application Processing, Trading Partner Enrollment, Trading Partner Eligibility & Oversight, and Trading Partner Relationship Management. The RID will play a major role within each of these business areas, and its business logic will be located in TPM as indicated throughout this document.

A series of high-level Data Architecture options were presented to FSA business owners during the future-state visioning meetings. Option D was agreed upon as the recommended solution. The following To-Be Financial Aid Life Cycle diagram, Figure 30 – To-Be Financial Aid Life



Cycle, illustrates the future-state picture agreed upon during these meetings. This diagram depicts the Business Capabilities listed above, highlights the FSA Gateway as a central point for Trading Partner interfaces with FSA, and a common data storage area, the Common Data Architecture (CDA). It should be understood that all data related to the RID, including the Legacy Identifier Crosswalk, will be housed in the CDA.

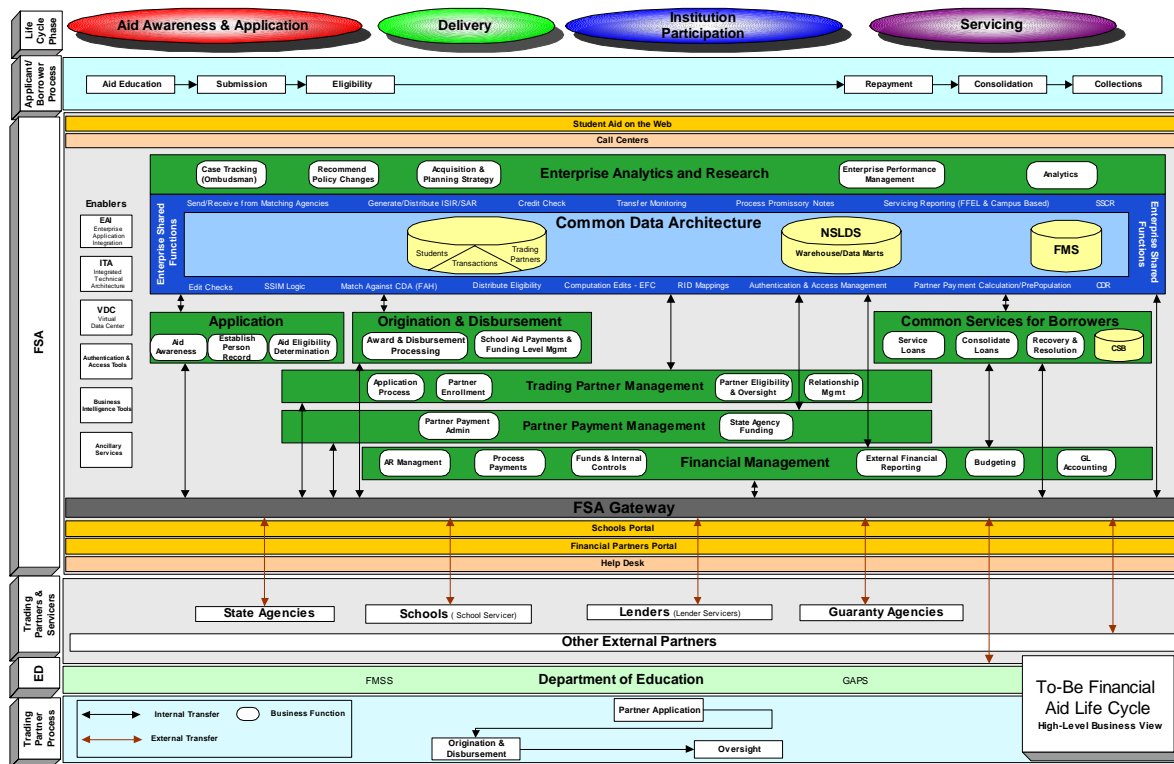


Figure 30 - To-Be Financial Aid Life Cycle

A major component of this future-vision is the ability to have a common store of student, School, and Trading Partner related data. As part of the CDA enabled capabilities, the RID will help to present an enterprise-wide view of Trading Partners. In the As-Is state, information about Trading Partners is often disparate and incomplete. The To-Be state, by leveraging the RID and the services it provide, will be able to present a more complete picture of FSA Trading Partners.

9.1.2 Trading Partner Legacy Identifiers

The following sections provide detail around the major legacy identifiers currently maintained within the FSA enterprise. The major legacy identifiers include: Office of Postsecondary Education ID (OPEID), Direct Loan (DL) ID, Pell ID, Federal Family Educational Loan (FFEL) ID, Federal School Code (FSC), Lender ID (LID), Guaranty Agency (GA) Code, State Agency Code, Private Collection Agency (PCA) Code, Integrated Postsecondary Education Data System (IPEDS) Unit ID, Electronic Campus Based (eCB) Serial Number, Taxpayer Identification Number (TIN), GAPS Award Number and GAPS Sequence Number, Data Universal



Numbering Scheme (DUNS) Number, and TG Number. The following sections provide additional detail around each of these major legacy identifiers.

9.1.2.1 Office of Postsecondary Education ID (OPEID)

The Office of Post-secondary Education ID (OPEID) is the PEPS system identifier recognized across legacy systems as the unique identifier. The OPEID provides structure and cross-program association of vendors during the conversion and interface process. The OPEID is a “smart” number, meaning that its digits have meaning. The meaning for each of the digits is as follows:

- Digit 1: indicate the type of Trading Partner. A value of zero thorough six represents a School, a value of seven represents a Servicer, a value of eight represents a Lender, and a value of nine represents a Guaranty Agency
- Digits 2-6: indicate a sequentially assigned number for primary School
- Digits 7-8: indicate sequentially assigned campus numbers

Currently PEPS creates an OPEID for Lenders and Guarantors by modifying their other identifiers, the LID and the GA code, to fit an eight-digit format by padding with zeroes. Like the OPEID for Schools, these zero-appended Financial Partner identifiers will be replaced with the RID.

9.1.2.2 Direct Loan (DL) ID

The DL ID is a unique ID that identifies a School. It is a six-digit code assigned to postsecondary Schools that are eligible to participate in the federal Direct Loan program. The DL ID consists of six digits; it begins with a ‘G’ (for Main Branch) or ‘E’ (for Attending Branch) followed by five digits. This code is current assigned by PEPS, but will be replaced with the RID. When retired, the Legacy DL IDs will be maintained by the Legacy Identifier Crosswalk.

9.1.2.3 Pell ID

The Pell ID is a six-digit code assigned to postsecondary Schools that are eligible to participate in the federal Pell Grant program. The Pell ID often, but not always, consists of the first six digits of its associated OPEID. Both a main School and location may receive a Pell ID. Additional locations will only have a Pell ID if they were previously eligible for the Pell program and carried their identifier will them. The Pell ID code is assigned by PEPS and used primarily by COD; CPS, FMS and NSLDS also utilize the Pell ID for certain processing. The Pell ID will be replaced by the RID as the primary School identifier for Pell processing. It will eventually be retired and maintained in the Legacy Identifier Crosswalk.

9.1.2.4 Federal Family Educational Loan (FFEL) ID

The Federal Family Educational Loan (FFEL) ID is a six-digit number assigned to a postsecondary School which is eligible to participate in the FFEL program. Like the Pell ID, the first six digits of the FFEL ID are taken from the associated OPEID. Both the main campus and



additional locations may receive a FFEL ID. The FFEL ID will be retired, replaced by the RID, and maintained in the Legacy Identifier Crosswalk for tracking purposes.

9.1.2.5 Federal School Code (FSC)

After Schools are approved for Program Participation Agreement (PPA) they receive a program code (OPEID) and Federal School Code (FSC). The FSC is currently stored and maintained by CPS. The FSC is composed of six characters, beginning with zero, G, B, or E and ending with a five-digit number. The Federal School code may, depending on the participation program, use the five digits from the OPEID, PELL ID or CB ID. If the school participates in the Pell program, its Federal School Code is the same as its Pell ID. If not, it's the same as its FFEL or DL code. If it participates in none of the previously mention programs but is in Campus-Based, the FSC starts with a B. Post-secondary locations without program identifiers (i.e, Pell, FFEL, Direct Loan, or Campus Based) can be assigned codes beginning with E on request; these codes are assigned internally within the Federal School Code file and don't match identifiers assigned by other systems.

The Federal School Code is used primarily during the application processes and is maintained within CPS. It is used on the Free Application for Federal Student Aid (FAFSA) in order to identify the Schools that should receive a student's ISIR. In the near future it is planned for the FSC to be stored by CPS but be updated by a scheduled update from PEPS. When the FSC is replaced by the RID, the RID would be the identifier used to indicate Schools on the FAFSA and for all application related processing. Although the FSC will be retired from processing, it will be included in the Legacy Identifier Crosswalk.

9.1.2.6 Lender ID (LID)

The Lender ID (LID) is a six-digit code assigned by ED to identify the Lender as a participant in the FFEL program. When the LID is sent to PEPS, two additional '00' are added to the end so that it can be stored and treated as an OPEID. The LID will be retired from internal FSA processing, and will be replaced by the RID. It must be determined how this transition will occur and if the Financial Partners community will continue to use this identifier when interfacing with each other and FSA. The LID will be included in the Legacy Identifier Crosswalk.

9.1.2.7 Guaranty Agency (GA) Code

The Guaranty Agency (GA) Code is a three-digit, all numeric identification code of the GA guaranteeing an FFEL Program Loan. FMS Operations manually sets up the GA with its basic demographic data directly into FMS. GA Code information is also manually entered into PEPS and NSLDS. PEPS creates a six digit GA ID in the format 999XXX00 that is compatible with the OPEID, but the three digits denoted by 'XXX' are not the same as the three-digit GA Code within FMS. PEPS also maintains a two-digit region code for GAs, which ranges from 21 to 78. This two-digit code is part of the Program Review Control Number/ Audit Control Number (PRCN/ ACN) assigned to audit and review records. Within the PRCN/ ACN the two-digit region code identifies the organization that is the reviewer. In the future GAs will complete the



Trading Partner enrollment process through FMS, and will receive a RID at the completion of this process. Like the LID, the GA Code will be included in the Legacy Identifier Crosswalk.

9.1.2.8 State Agency Code

State Agencies use a four character code to identify themselves within FMS. This code begins with 'ST' for state followed by the two-letter abbreviate for the specific state. For example, a Virginia State Agency would be identified by the code 'STVA'. Other systems identify state entities differently; within Participation Management (PM) the states are identified by their two-digit state code followed by a number (e.g., 'VA2'). In NSLDS online uses the two-digit state abbreviation followed by two numbers (e.g., 'VA25'). These codes will be replaced by the eight-digit RID. After RID implementation, the State Agency Code will not be generated or used during processing within the FSA enterprise, but will be maintained in the Legacy Identifier Crosswalk.

9.1.2.9 Private Collection Agency (PCA) Code

PCA Location Codes are five character codes that begin with 'AG' and are followed by three numbers which identify the particular collection agency. For example, location code 'AG406', belongs to Diversified Collection Services. All accounts that are transferred to Diversified Collection Services would show the location code of 'AG406'. PCA Codes will eventually be retired, replaced by the RID, and maintained in the Legacy Identifier Crosswalk for historical purposes.

9.1.2.10 Integrated Postsecondary Education Data System (IPEDS) Unit ID

The National Center for Education Statistics (NCES) uses the Integrated Postsecondary Education Data System (IPEDS) as a postsecondary education data collection program. It is a single, comprehensive system that encompasses all identified institutions whose primary purpose is to provide postsecondary education. IPEDS consists of institution-level data that can be used to describe trends in postsecondary education at the institution, state and/or national levels. IPEDS Unit IDs are assigned to: baccalaureate or higher degree granting institutions, two-year award institutions, and less-than-two-year institutions. Since this is an identifier that is larger in scope than FSA and Title IV aid, it cannot be retired. A Trading Partners IPEDS Unit ID will be included as part of the Legacy Identifier Crosswalk and therefore connected to its associated RID.

9.1.2.11 eCB Serial Number

When a School submits an application on the eCB website, a temporary identification number is created, which starts with the letter 'W' and always has two leading zeros. This "dummy" number is assigned since it can take eCB an extended period of time to process an application and produce an eCB Serial Number. A School will receive an eCB Serial Number consisting of all zeroes when they submit the Fiscal Operations Report and Application to Participate (FISAP) but have not yet had an OPEID assigned. The eCB Serial Number consists of the following:



- Digits 1-2: Always zero
- Digits 3: 'W'
- Digits 4-6: Taken from the Award ID (GAPS Number)

The RID will replace the eCB Serial Number as the main identifier for Campus-Based processing within FSA. Until the identifier is fully phased-out, the Legacy Identifier Crosswalk table, which ties eCB Serial Numbers to their appropriate RID, can be utilized for mapping purposes. When the eCB Serial Number is retired, legacy identifiers will no longer be produced but will still be maintained for historical purposes.

9.1.2.12 Taxpayer Identification Number (TIN)

A Taxpayer Identification Number (TIN), also known as the Employee Identification Number (EIN), is an identification number used by the Internal Revenue Service (IRS) in the administration of tax laws. This number first appears within FSA during the application process in PEPS for Schools and in FMS for Lenders and Guaranty Agencies. In both cases, the number is manually entered into FSA systems. Institutions provide their TIN for initial identification purposes. Schools also use the TIN for identification purposed during the eZ-Audit process. Since the TIN is established and used outside of FSA, it is not slated for retirement. This identifier will not be maintained by the Trading Partner subject area of TPM (i.e., the RID component) but rather the Profile/Demographic subject area of TPM. For more information related to the maintenance of the TIN or the various subject areas of TPM, please refer to Section 4.4.1.5 – TRADING PARTNER LEGACY IDENTIFIER TYPE and Section 4.5.1 – Trading Partner Management System Integration, respectively.

9.1.2.13 GAPS Award Number and GAPS Sequence Number

GAPS Award number is created in GAPS for new Pell/DL and Campus Based transactions and is updated for each fiscal year of funding. It is a unique, 11-character number that identifies each award issued by a specific office to a specific grantee. For example, in P031B921234, '92' indicates FY 1992 funding and therefore the funding for the following is P031B931234. The GAPS Award number is generated using a specific algorithm. Using the example above, it is composed of the following:

- Digit 1: 'P' = Principal Office designator
- Digits 2-4: '031' = CFDA numeric suffix of the program
- Digit 5: 'B' = Alphabetic sub-program identifier
- Digits 6-7: '92' = last two digits of funding fiscal year
- Digits 9-11: '1234' = Sequence Number (unique identifier)

Depending on the type of funding the GAPS Sequence Number (i.e., the last four numeric digits of the GAPS Award Number) can come from COD for Pell/DL or eCB for CB transactions. The GAPS Award number is not planned for retirement. It will be part of the Trading Partner Management information about a particular institution.



9.1.2.14 Data Universal Numbering Scheme (DUNS) Number

A Dun & Bradstreet Data Universal Number Scheme (DUNS) Number is a unique nine-digit sequence recognized as the universal standard for identifying and keeping track of many different businesses. Within the Department of Education, the DUNS number is used to identify Trading Partners, including Schools, Lenders, GAs and State Agencies, within GAPS. Entities may have both a Payee DUNS and a Grantee DUNS Number for payment and funding processing. Like the GAPS Award Number, the DUNS Number will continue to be utilized and will not be replaced by the RID. It will, however, be included in the Legacy Identifier Crosswalk.

9.1.2.15 TG Number

The TG Number is the destination point number assigned to an institution when enrolled in the Student Aid Internet Gateway (SAIG), a tool that enables Trading Partners to exchange information electronically with FSA. The TG Number consists of the letter 'TG' followed by a five-digit number beginning with five, six, seven or eight. The TG number is used to identify a mailbox for the SAIG service and is assigned by Participation Management (PM) within FSA. This identifier is directly related to a Trading Partner's ability to conduct electronic information exchange with FSA rather than related to actually identifying the Trading Partner. Therefore, it is possible for a Trading Partner to have more than one TG Number. This being the case, the replacement of this identifier will not occur via the assignment of a single RID to a particular Trading Partner entity, but rather through a combination of access management and external technologies that are implemented as a result of the Data Strategy initiative. Until this identifier is retired it will be tracked via the Program subject area of TPM and will be maintained within the Legacy Identifier Crosswalk.

9.1.3 Legacy Identifier Crosswalk and RID Storage

The Legacy Identifier Crosswalk will consist of the business process logic and storage mechanism for relating Legacy Identifiers to their corresponding RID. The legacy identifiers currently slated for the Legacy Identifier Crosswalk include, but may not be limited to: OPEID, DL Code, Pell ID, FFEL ID, FSC, LID, GA Code, State Agency Code, PCA Code, IPEDS Unit ID, eCB Serial Number, TIN, GAPS Award Number, DUNS Number, and TG Number. It is important to note that the TIN, GAPS Award Number, DUNS Number and TG Number will not be tracked by the Trading Partner subject area of TPM (i.e., the RID component) but rather the Profile/Demographic subject area or the Program subject area, as described in Section 4.4.1.5 - TRADING PARTNER LEGACY IDENTIFIER TYPE.

As mentioned in Section 5.4 - Add Trading Partner Legacy Identifier(s), when a RID is initially created to identify a particular Trading Partner, the Trading Partner's other identifiers (e.g., DL Code, eCB Serial Number, etc.) must be kept and cross-referenced to the new RID. Although Legacy Identifiers will eventually be retired, meaning they will no longer be produced or used in processing within the FSA enterprise, it is essential to keep them for historical purposes.



The business process portion of the Legacy Identifier Crosswalk includes the business logic behind associating these identifiers with Trading Partners using the RID. The crosswalk is not static, since updates can be made for various reasons such as Trading Partner Enrollment or Recertification updates (e.g., a School Servicer adding a School role to their current RID), Changes of Affiliation (e.g., a Merge Absorption Change of Affiliation may introduce additional legacy identifiers to the absorbing institution's RID), and updates by FSA approved staff (e.g., a manual update of legacy identifiers such as adding an IPEDS number to a RID). The exact business rules surrounding legacy identifier updates in particular, and the Legacy Identifier Crosswalk in general must be determined by future efforts and will eventually be included as part of the TPM business function.

The storage component of the Legacy Identifier Crosswalk consists of the physical storage of RID data and the design of a cross-reference method for legacy identifier information. In the future vision of the FSA enterprise, the Legacy Identifier Crosswalk will be part of the Common Data Architecture (CDA). The RID information will be centrally maintained so that business functions that process transactions or contain messages utilizing the RID can be properly executed. Using the RID as the common identifier when dealing with external trading partners enables standardization efforts to help create a cost-effective and efficient data exchange process. All data exchanged inside of FSA that includes a Trading Partner identifier will include that Trading Partner's RID. The actual layout of the crosswalk information, the technical details surrounding it, and the method for storing the RID will be determined by future TPM efforts. For more information regarding the Common Data Architecture, please reference the Data Framework Specification (Deliverable 123.1.4), section 4 *FSA Future-State Data Architecture*.

The Legacy Identifier Crosswalk will be instrumental in the RID implementation process. It will enable communication between systems, either internal or external, using different Trading Partner identifiers. It is understood that the RID cannot be implemented immediately in all systems. Therefore, there will need to be a crosswalk to allow communication between RID enabled systems and systems using legacy identifiers. For example, a GA could send NSLDS data with a GA Code even if NSLDS is processing using the RID; the crosswalk would be used for translation purposes. As FSA moves towards its target vision of the CDA supporting shared service capabilities, the RID will be instrumental for enabling cross life cycle application processing related to Trading Partner information. For more information about Integration Services and how they may play into the RID implementation, please refer to Section 9.1.4 – Trading Partner Access and Internal Integration Capabilities.

Once the RID implementation is complete, meaning that all internal and external systems are utilizing it as an identifier for processing and interfacing, the Legacy Identifier Crosswalk will no longer need to be used for systems to system communication. However, the crosswalk will continue to be updated as needed and maintained to ensure chronological completeness for Trading Partner entities.



9.1.4 Trading Partner Access and Internal Integration Capabilities

In the future vision, the interactions between FSA and its Trading Partners will be simplified and consolidated through a single virtual entry point known as the FSA Gateway. The FSA Gateway intends to standardize the methods of interfacing between external entities and FSA data and service capabilities. It will also facilitate the exchange of data between FSA and its trading partners' systems by providing increased visibility into data exchange and enabling external entities to access capabilities offered by the Common Data Architecture. By implementing the RID, the FSA Gateway can efficiently route and track data across enterprise boundaries. For example, the RID can aid in audit trails, data reconciliation and Trading Partner validation.

In addition to extending TPM capabilities, the FSA Gateway could leverage resources provided by the Common Data Architecture's integration capabilities. It could extend services such as data transformation, business process management, and standardized error handling to interactions that take place with Trading Partners. For example, the data transformation piece of the Integration Services could be leveraged during the RID implementation. This vehicle could enable translations between legacy identifiers and the RID by using the Legacy Identifier Crosswalk. This would remove this duty from individual systems or Trading Partners. This does not mean that systems would not be responsible for implementing the RID in their processing and interfaces. It simply means that systems would not have to be concerned with whether a system they are communicating with is RID enabled. For example, if a RID enabled system (or Trading Partner) is communicating with another system that is not yet RID enabled, internal integration capabilities could handle the translation of Trading Partner identifiers as needed. For more details about the FSA Gateway and its interfaces please reference the External Information Access (FSA Gateway) Strategy (Deliverable 123.1.11).

9.1.5 Security and Access Management

Along with its other benefits, the RID may help to enable FSA's security vision and play an integral part in the Access Management process. The Access Management piece of the Data Strategy initiative focuses on requirements for Trading Partners to access FSA systems. The concept of Access Management is closely tied to security. Security work has been conducted for FSA to determine the appropriate security services through the deployment of security architecture components. In the current environment, Enrollment and Access Management are not standardized and occur in disparate systems. The future vision for FSA eliminates these issues by creating a centralized place to implement a set of standards. The RID may be an integral part of enabling these standards. The RID can also be used to enforce accountability if leveraged efficiently in accordance with Access Management controls. The RID will create a standard identification method for Trading Partners, and this can help to facilitate security and Enrollment and Access Management initiatives in the future.

9.2 *Data Clean Up & Initial Start Up*

In order for the RID component to function effectively it needs to start with the right data. This is an extremely important point since the RID component will only be as good as the data that is



loaded into it. Currently there are legacy identifier discrepancies among the various legacy systems and issues with duplicate Common School IDs that exist within COD. If these issues are not addressed prior to the initial data load there will be no way for the RID component to prevent data discrepancies from being passed to or utilized by downstream systems. Thus, the confusion that exists around identifying Trading Partners in today's environment would continue. To prevent this from occurring, an extensive data clean up effort must be undertaken prior to the initial data load during the TPM/RID implementation.

The data clean up effort will involve the following comparisons of legacy identifiers for synchronization purposes. The platform, method, and timing of this synchronization will be determined during the Detailed Design Phase of the RID component.

- Comparison and matching of OPEIDs between PEPS and other legacy systems
- Comparison of Common School IDs within COD to identify and consolidate duplicates
- Comparison of LIDs within FMS to identify and consolidate duplicates and modification of LIDs to meet RID length requirements³

The data clean up effort will involve manual intervention when reviewing and correcting inconsistencies between existing FSA systems and will require dedication from FSA SMEs and key business owners. These individuals will be responsible for making key decisions regarding how best to resolve data discrepancies once they have been identified.

The data clean up effort will need to be an iterative process, requiring multiple cycles of the above comparisons. As errors are resolved via manual intervention by the FSA SMEs and key business owners, it will be necessary to repeat all comparisons to ensure that no additional errors exist within the data.

The end result of the data clean up effort will be the creation of data extracts deemed acceptable to move into the RID component. Once these extracts are created, the initial data load will begin. The initial data load will involve adding the existing Common School IDs generated by COD as RIDs with a role of School as the default and adding the existing LIDs generated by FMS as RIDs or generating new RIDs for the existing LIDs, depending on which option is selected for Lenders (for more information on the various options, please refer to Section 11.3.2 – Lenders), with the appropriate role of Lender or Lender Servicer. All corresponding synchronized legacy identifiers will be added to each role. In addition, all existing known relationships between the various roles will be established. This will include both business and grouping relationships. The initial data load process will also generate RIDs and add roles, legacy identifiers, and relationships for all existing Trading Partners who do not already have a RID. The platform, method, and timing of this initial data load will be determined during the Detailed Design Phase of the RID component.

³ This comparison will only be necessary if it is decided that it is necessary to convert the existing six-digit LIDs to eight-digit RIDs by adding leading or trailing zeros. For more information on this option, please refer to Section 11.3.2 – Lenders.



At the conclusion of the initial data load, the RID component should contain clean, properly synchronized data about all existing Trading Partners that will be the standard for Trading Partner identification within the Common Data Architecture of the FSA enterprise.

Ongoing data synchronization will be necessary as long as Trading Partner related information is stored within each of the individual legacy systems. The target state vision for the FSA enterprise is for all Trading Partner related information to be stored within the Common Data Architecture. Until this target state is reached it will be necessary for periodic synchronization of the information contained with the various legacy systems to take place. If discrepancies are found there must be business rules in place for how these discrepancies should be resolved. The details for the ongoing data synchronization and the documentation of the business rules necessary for resolving any discrepancies that are uncovered during periodic data synchronization will be addressed during the Detailed Design phase for the RID component.

9.3 RID High-Level Sequencing Approach

The implementation of the adoption of the RID within the internal FSA enterprise and external Trading Partner community is a process that will consist of several phases. This process will begin once the RID component portion of the TPM implementation is complete and RID generation and relationship tracking is taking place within TPM (i.e., once Phase 0 – RID Generation in TPM is complete). At this point, none of the business capabilities outside of TPM will be capable of utilizing the RID for processing purposes. Enabling these business capabilities to utilize the RID will be the first step. This will take place during Phase 1- Internal RID Implementation. The end result of this phase will be that all internal communication related to Trading Partners within FSA enterprise will be conducted utilizing the RID. The next step in the process will be to convert all external partners to utilize the RID in their communications with FSA. This will take place during Phase 2 – External Partners RID Implementation. It is important to note that there is potential for overlap between the Phase 1 – Internal RID Implementation and Phase 2 – External Partners RID Implementation due to the use of the Legacy Identifier Crosswalk which will enable translations from legacy identifiers to RIDs and vice versa. The end result of the Phase 2 – External Partners RID Implementation will be that all internal and external communication will be conducted utilizing only the RID. The final step in the process will be to cease the generation of the legacy identifiers and perform a clean up of the legacy identifiers within the legacy systems. This will take place during Phase 3 – Legacy Identifier Clean Up. This concept of a phasing the sequencing of the RID into the internal and external FSA enterprise is illustrated in the following figure.



Data Strategy Enterprise-Wide Routing ID RID High-Level Design

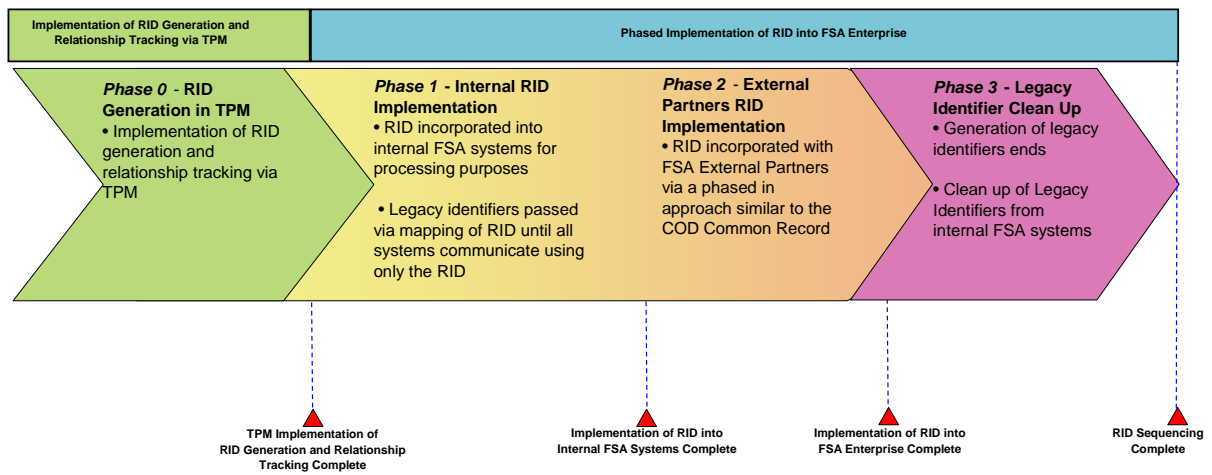


Figure 31 – RID High-Level Sequencing Approach



10 High-Level Testing Strategy & Scope

This section of the High-Level Design for the RID component details the high-level testing strategy and testing scope for the RID component. The testing strategy and testing scope outlined in the following sections primarily support the activities required to test and obtain acceptance for the RID component of TPM. It is recommended that the same logic be carried forward into the definition of the testing strategy and testing scope for TPM in its entirety. Additionally, the testing strategy and the testing scope for the RID component will need to be more fully detailed during the Detailed Design phase of the RID component.

10.1 Test Process

The process used to structure the test activities for the RID component should consist of the following pieces: Develop Approach, Plan Test, Prepare Test, Execute Test, Manage Test, and Establish and Operate Test Environment. This process is illustrated in the following figure. The details for each piece of the test process will be detailed during the Detailed Design Phase of the RID component.

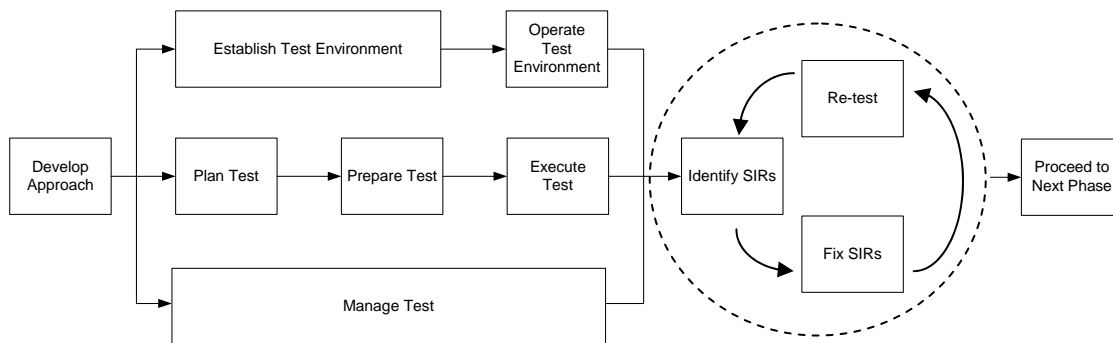


Figure 32 – RID Component Test Process

10.2 Test Scope

The following sections provide information on the various portions of the RID component that will need to be addressed during the testing phase including high-level business scenarios and reports. Additional items that will need to be addressed during the testing phase will likely be identified and outlined during the Detailed Design phase of the RID component.

10.2.1 High-Level Business Scenarios

Various business scenarios related to the high-level functional requirements as well as the core solution process should be considered during the testing phase for the RID component. The following list provides an outline of the high-level business scenarios and underlying components that should be tested. These business scenarios will be revisited and potentially supplemented and/or revised during the Detailed Design phase of the RID component.



- Data Synchronization & Initial Data Load
 - Synchronize Legacy Identifiers within Existing Legacy Systems
 - Synchronize Common School IDs (i.e., RIDs) Assigned by COD
 - Load Existing Common School IDs Assigned by COD as RIDs
 - Load Existing Business and Grouping Relationships
- Add New Trading Partner
 - Generate and Assign Routing ID
 - Add Trading Partner Role(s)
 - Add Trading Partner Legacy Identifier(s)
 - Assign Trading Partner Relationship(s)
- Modify Existing Trading Partner
 - Change Trading Partner Name
 - Modify Existing Trading Partner Relationship(s)
 - Add Trading Partner Role(s)
 - Add Trading Partner Legacy Identifier(s)
 - Modify Existing Trading Partner Relationship(s)
- Change of Affiliation
 - Location to Freestanding
 - Merge/Consolidation
 - Merge/Absorption
 - Redesignation
 - Role to Freestanding
 - Role Consolidation
 - Role Absorption

10.2.2 Reports

Reporting will be an extremely important function of the RID component. The reports generated by the RID component will allow FSA to gain a holistic view of all Trading Partner interactions throughout the enterprise. The reporting function will produce two main types of reports, error reports and audit reports. These reports should be able to be produced both formally on a daily/weekly/monthly basis and informally on an ad hoc basis (i.e., at any time). The formal reports will be automatically produced by the system while the ad hoc reports will rely on a manual trigger from an FSA approved staff member. Both the audit reports and the error reports generated by the RID component must be fully tested. The following lists outline at a high-level the various types of audit and error reports that should be tested. These audit and error reports will be revisited and potentially supplemented and/or revised during the Detailed Design phase of the RID component.

- Audit Reports
 - Synchronization Reports
 - Successful Addition of Trading Partners During Initial Load
 - Successful Addition of New Trading Partners
 - Successful Modifications to Existing Trading Partners
 - Successful Processing of Change of Affiliation Requests



- Ad Hoc Reports for a Specific Trading Partner
- Ad Hoc Reports for a Group of Trading Partners
- Error Reports
 - Unsuccessful Addition of Trading Partners During Initial Load
 - Unsuccessful Addition of New Trading Partners
 - Unsuccessful Modifications to Existing Trading Partners
 - Unsuccessful Processing of Change of Affiliation Requests



11 High-Level Risk Analysis & Impact Assessment

This section of the High-Level Design for the RID component details the potential risks inherent with the implementation of the RID component into the FSA enterprise. It also identifies the impacts this implementation will likely have on both internal FSA systems and external Trading Partners.

11.1 Potential Risks & Mitigation Strategies

Throughout the creation of the High-Level Design for the RID component several potential risks have been identified. The following table outlines the potential risks that have been identified to date and provides a brief description of each. This table also outlines the key mitigation strategies to address each of the risk areas. This list will need to be revisited and potentially revised during the Detailed Design Phase for the RID component.

Risk Type	Description of Risk	Mitigation Strategy
Financial	Delay in receiving approval of deliverables and resolution of issues	Maintain close coordination between project team and the project sponsors
Technical	The potential for newly generated RIDs to interfere with the namespace of existing or newly generated OPEIDs since both are eight-digits	Retirement of the OPEID as soon as possible or include an edit within the RID component that ensures RIDs are checked against all existing OPEIDs after being generated but before being assigned to a particular Trading Partner
	Challenges to clean, synchronize, and convert the existing legacy system data to a new database of all Trading Partner related data (i.e., the Common Data Architecture)	A detailed conversion plan needs to be established during the Detailed Design phase of the RID component and this plan needs to be reviewed and closely monitored during the initial data load during the TPM/RID implementation
Functional	Steep learning curve for some users	Develop an extensive and effective training program for the TPM in general and the RID component in particular
Scope	Business Process Reengineering activities do not occur prior to detailed design potentially preventing the achievement of existing issue resolution (i.e., Change of Affiliation)	Identify all Business Process Reengineering tasks that need to take place, identify a point person for each, and work to implement recommendations/changes prior to completion of detailed design



Risk Type	Description of Risk	Mitigation Strategy
Management	The number of on-going projects could overextend FSA resources	Close interaction with the project sponsor and key decision makers to ensure strong coordination and planning for efficient utilization of FSA resource time
Exposure	High external exposure during implementation and transition phase due to the business and systems interaction with many outside entities (i.e., external Trading Partners)	Strong project management to ensure quality planning, execution and communication to both internal and external entities involved

Table 34 – RID Component Potential Risks & Mitigation Strategies

11.2 Impacts to FSA Systems

All business areas within the future FSA enterprise as defined during the various Data Strategy retreats including Application (i.e., Central Processing System functionality), Origination & Disbursement (i.e., Common Origination & Disbursement functionality), Trading Partner Management, Common Services for Borrowers (i.e., Direct Loan Servicing System, Direct Loan Consolidation System, Debt Management Collections System, and Conditional Death and Disability Tracking System functionality), Financial Management (i.e. Financial Management System functionality), Partner Payment Management, and Enterprise Analytics and research (i.e., National Student Loan Data System and other enterprise-wide analytical functionality) are expected to utilize the RID as the key identifier for Trading Partners. This being the case, internal FSA systems will need to make certain adjustments to accommodate for the RID. The following sections outline the potential changes that have been identified to date for the following systems: Central Processing System (CPS), Common Origination & Disbursement (COD), Common Services for Borrowers (CSB), Electronic Campus Based (eCB), Financial Management System (FMS), National Student Loan Data System (NSLDS), and Data Marts. The potential changes that are outlined will have to be revisited and potentially revised during the Detailed Design Phase for the RID component.

11.2.1 Central Processing System (CPS)

The CPS currently maintains Federal School Code (FSC) information. These codes are used on the Free Application for Federal Student Aid (FAFSA) to determine which institutions should receive a copy of an applicant's Institutional Student Information Record (ISIR). Along with the FSC, CPS also stores School eligibility information. There are plans to move the maintenance and storage of the FSC to PEPS in January of 2004. CPS would no longer be responsible for maintaining this School ID. The FSC functionality, along with PEPS' other functions, will be incorporated into the Trading Partner Management solution. With the implementation of the RID this code will eventually be retired. The RID would be used on the FAFSA or other application equivalent (for PLUS borrowers) and to designate which Schools should receive an applicants' ISIR.

Schools communicate with CPS using EDEExpress or other third-party software. Currently institutions participating in the Electronic Data Exchange (EDE) with FSA allow students or



institution staff to enter student application data on a personal computer. This data then is electronically transmitted through the Student Aid Internet Gateway (SAIG) to the CPS, where it is processed. Although Schools may customize their software to participate in EDE, many use EDEExpress, an integrated ED-provided software package that allows participants to enter, report, and manage all Title IV student financial aid applications. The EDEExpress tool as well as other third-party vendor tools will have to be adjusted to accommodate the RID. In accordance with the RID high-level sequencing plan, external entities (including Schools) will be phased in to using the RID. For more detail on external entity conversion, please refer to Section 9.3 – RID High-Level Sequencing .

11.2.2 Common Origination & Disbursement (COD)

Schools main interaction with COD is via the Common Record, a commonly formatted vehicle for sending FSA Direct Loan and Pell award and disbursement information. Currently, the Lender EntityID, Guarantor EntityID, and School EntityID are included on this record. The School EntityID is used to cross-reference related identifiers (i.e., OPE ID, Direct Loan ID, Reporting Pell ID, DUNS number, etc), which are needed for award processing and reporting. School IDs are also used to tie institutions to their Current Funding Level and School Ceiling Amounts, as well as their Funding Methods and Funding Controls. This information is used by COD to determine if awards and disbursements are valid and tracked properly for monitoring purposes.

COD is the generator of the RID and the GAPS Award Sequencing Number. At this time, COD is the only system that employs the RID. Currently COD tracks relationships between School entities, such as linking the Funding, Attending, and Reporting Institutions. These relationships are currently maintained within COD and are updated periodically using information from the PEPS Daily School File. In the future, COD will no longer create the RID nor will it maintain and update relationships; this functionality will be handled within TPM. The Common Record will continue to contain the RID. This will allow Schools and School Servicers to send COD their RID along with origination and disbursement records. COD will use the RID to report Pell Grant information and to pass booked Direct Loan records to Common Services for Borrowers. As a result of the RID implementation the DL Award ID will contain the RID instead of the DL ID, and COD will need to accommodate for this change. For more details about the DL Award ID RID-related changes, please refer to Section 11.2.3 – Common Services for Borrowers (CSB).

11.2.3 Common Services for Borrowers (CSB)

Direct Loan Servicing System (DLSS) receives Direct Loans from COD for servicing. DLSS, along with the other components of servicing, use a Loan Identifier, known as the DL Award ID for Direct Loans as their primary identifier.

For Direct Loans, The Direct Loan Award ID (Loan Identifier) follows this format for all years:

- Digits 1-9: Student's Social Security Number: 001010001-999999998
- Digit 10: Loan Type: S = Subsidized, U = Unsubsidized, P = Plus



- Digits 11-12: Program Year: 0X where for program year 2004, X = 4
- Digits 13-18: School Code: X00000-X99999 where X = G or E
- Digits 19 - 21: Loan Sequence Number: 001-999

When the RID is implemented this Loan Identifier will have to be adjusted to include the RID. This will affect all parties and systems that currently use the DL Award ID; the actual field length will have to be increased by two characters to accommodate for an eight-digit School ID. A possible layout is as follows:

- Digits 1-9: Student's Social Security Number: 001010001-999999998
- Digit 10: Loan Type: S = Subsidized, U = Unsubsidized, N = Plus
- Digits 11-12: Program Year: 0X where for program year 2004, X = 4
- Digits 13-20: RID
- Digits 21 - 23: Loan Sequence Number: 001-999

Of course the actual ID layout will be dependent on the TPM detailed design, in general, and the RID detailed design, in particular. Loan Identifier considerations must include how to handle historic identifiers if the field format is changed (e.g., DL Award ID increasing two characters from 21 to 23 digits), and any changes will have to be rolled out to internal FSA systems as well as the Trading Partner community.

The Direct Loan Consolidation System (DLCS), like DLSS, uses the Loan ID as its primary Identifier and ties institutional information to specific awards. Any RID related changes to Loan Identifiers will affect the Consolidation business process within CSB. During this process CSB will need to provide the appropriate Loan IDs (containing the RID) to FMS, which uses GAPS, to pay off Lenders and provide refunds.

The Debt Management Collection System (DMCS) currently receives certain new debts such as Pell Grant and Federal Supplemental Educational Opportunity Grant (FSEOG) overpayments and defaulted Perkins Loans from Schools. They also receive Perkins Loans that are not defaulted from closed Schools. DMCS currently maintains School information that is not regularly updated. Because of this, loans are often rejected for servicing and are considered to be invalid because they have School information that is not present within DMCS. With the implementation of the RID and functionality within TPM, CSB will have access to the most current School information. This will aid in the servicing of delinquent loans and closed School debts and will prevent valid loans from being unnecessarily rejected.

During the repayment process, Conditional Disability Discharge Tracking System (CDDTS) sends loan information to internal and external entities for the processing of disability claims. CDDTS receives a request for the discharge of a loan, and it sends back a notification of acceptance or rejection of the discharge (i.e., payments made during discharge process are refunded or loans are returned to servicing). Like all of the business functions involved in CSB,



CDDTS' processes will be affected by the DL and FFEL Award ID changes aforementioned as well as Schools, GAs, and Lenders adapting the RID as their primary identifier.

Although each system (i.e., DLSS, DLCS, DMCS, and CDDTS) is addressed separately here, it is understood that in the future they will be part of CSB.

11.2.4 Electronic Campus Based (eCB)

Currently Schools interact with eCampus Based (eCB) by using their eCB Serial Number. In the past these serial numbers were sometimes assigned before a School received Title IV eligibility through PEPS. This was done so that Schools could begin the FISAP process before the completion of the E-App enrollment process. In these cases, Schools would be assigned a temporary serial number to access eCB before their eligibility is determined in PEPS. In order to process the institutions transactions, the Participant Management used this temporary number until the School was issued an official OPEID. Occasionally, these temporary OPEIDs created an opportunity for non-Title IV eligible Schools to receive Campus-Based aid.

Currently the eCB Serial Number is not the same or associated with an OPEID within PEPS nor is it aligned with FMS for use in Campus Based disbursements. Other FSA systems must map School's Campus Based Identifier to their needed IDs (e.g., OPEID in PEPS, DUNS Number in FMS) since eCB is the only systems utilizing the eCB Serial Number. Implementing the RID solution will allow Schools to complete the FISAP using the RID. The RID will help to create a complete funding picture for Institutions, comprised of all Title IV Aid. It will reduce the number of identifiers Schools use to interact with FSA, and ultimately eliminate the need for internal FSA systems to cross-reference and map institution identifiers.

The main business processes within eCB will be incorporated into Trading Partner Management (TPM).

11.2.5 Financial Management System (FMS)

COD provides FMS with records of financial and non-financial transactions from originations and disbursements. After receiving transactions from COD, FMS interfaces with GAPS for disbursement information and to set funding levels. Currently the COD FMS interface consists of the following School Identifiers: The Grantee Institution ID, the Payee Institution ID, and the Grantee DUNS Number. The first two identifiers are used primarily in COD and the third is used for processing within GAPS. Within COD, the Institution ID is also known as the Common School Identifier (CSID) and/or the School Entity ID; these are COD's version of the RID.

Although the intention of the RID is to take the place of most Trading Partner identifiers, certain identifiers will not be replaced or retired. These identifiers include the Tax Identification Number (TIN) and the DUNS Number; they are utilized by systems and entities outside of the scope of FSA and therefore will remain in operation.



FMS serves as FSA's accounting system, handles payment generation for Lenders and GAs, funds remittances processing (Lender Fees), maintains Lender and GA information such as contact information, bank routing information, TIN, LID and GA Code, and controls security clearance and system access authority for Lenders and GAs. It is also utilized as the entry point for State Agencies' funding requests and the Lender Application Process. In the future, State Agencies and Lenders will be set up through TPM. TPM will establish State Agencies' RID and will eventually create the Lenders' RID.

FMS is currently responsible for creating Lender IDs (LIDs) during the Lender Application Process (LAP). After the LAP process, the LID and the Lender's TIN are used for the eligibility validation process. This process includes, but is not limited to, the submission, review and approval of Lender FMS security forms and Organization Participating Agreements (OPA). The LID, GA Code and TIN are involved in partner payment processing transactions, such as Interest Benefits and Special Allowance Payments to Lenders and Loan Processing Issuance Fee (LPIF) and Account Maintenance Fee (AMF) payments to Guarantors. During these processes FMS interfaces directly with the Department of Education's Financial Management System (FMSS) which in turn interfaces with Treasury.

Although TPMS will be the central application for Trading Partner Enrollment, Participation, and Oversight, the LID generation functionality will not reside in TPM. It will be necessary for TPM to kick off a request to FMS to generate LIDs. This will continue until all internal and external communication is conducted via the RID and the LID is retired. This approach is considered to be more efficient than moving the LID generation functionality from FMS to TPM since this function will eventually be discontinued. For more information related to the process of TPM kicking off the request for a LID to FMS, please refer to Figure 13 – Add Trading Partner Legacy Identifier(s) Process Flow in Section 5.4 – Add Trading Partner Legacy Identifier(s).

11.2.6 National Student Loan Data System (NSLDS)

NSLDS receives a copy of the disbursements that Schools, Lenders, and GAs have distributed to borrowers. It receives this information using the Loan/Award ID and various other Trading Partner identifiers. Currently, NSLDS uses the GA Code, LID and OPEID as the main identifiers for GAs, Lenders, and Schools respectively. It does, however, collect other Trading Partner identifiers from PEPS, such as the TIN, DUNS Number, Pell ID, FFEL ID, DL ID, CB Serial Number, and FSC. These identifiers are received from PEPS are maintained in NSLDS and are used mostly for research and/or tracking purposes. They are kept in a "validation translation" table which is used to tie them to their corresponding OPEID.

The OPEID currently drives most of NSLDS' business functions, including: Cohort Default Rate calculations, enrollment, and reporting functionality. The OPEID is used for loan identification purposes; NSLDS matches on five fields to identify a loan: the Original School OPEID, Loan type, Date of loan, Indicator of separate loan (FFEL and Direct), and the PLUS borrower's SSN (FFEL and Direct). The OPEID cannot be easily replaced in current NSLDS processing since it is "hard coded" into a majority of the tables.



Because the OPEID is so instrumental in NSLDS processing, the implementation of the RID must be a gradual process. Until the RID is directly incorporated into NSLDS, a mapping function, enabled by the Legacy Identifiers Crosswalk, should be utilized to translate from RIDs to OPEIDs and vice versa as needed. Any major modifications to replace the OPEID with the RID would have to occur during a system-wide re-engineering effort. With the implementation of the RID, NSLDS will also have to ensure that the RID can be used in place of the GA Code for Guarantors and the LID for Lenders.

11.2.7 Data Marts

The Financial Partners Data Mart (FPDM) receives Financial Partner participation information from PEPS, NSLDS, and FMS. PEPS sends Lender audit and program review data to the Data Mart and any deficiencies found for the audit or review. The FPDM also receives GA & Lender participation information from FMS and NSLDS. Since the FPDM is a repository and reporting tool for Financial Partners' participation information, it will need to use the RID (instead of the LID and the GA Code) as the primary identifier for Lenders and GAs. It will also be affected by RID-driven changes to the FFEL Award ID. The FFEL Award ID will no longer include the Participant ID, which is a 3-digit number for Guarantors, a 6-digit number for Lenders, and the first 6 digits of the 8-digit OPEID for Schools, instead the FFEL ID will include the 8-digit RID. For more information regarding changes to the FFEL Award ID, please refer to Section 11.3.2 – Lenders.

The Direct Loan Data Mart (DLDM) is responsible for providing a delinquency report to Schools for delinquent borrowers. The DLDM will need to adjust for the revised Direct Loan Award ID, which will be increased from the 21 digits to 23 digits to include the 8-digit RID in place of the School's 6-digit DL Code. For more information regarding changes to the Direct Loan Award ID, please refer to Section 11.2.3 – Common Services for Borrowers (CSB). The DLDM will also need to use the Schools' RID as its primary School identifier.

The Credit Management Data Mart (CMDM) houses funding and payment information. FMS receives payment and other Direct Loan transactions (e.g., refunds, misdirected payments, and interagency transfers, etc.) on booked loans, adjustments to the loan, manual journal vouchers, and excess cash from DLSS. FMS summarizes this data and passes the details to the CMDM for storage and reporting purposes. Like the DLDM, the CMDM will have to adjust to include the revised Direct Loan Award ID as well as the RID as the primary School identifier.

Currently each Data Mart receives data directly from other internal FSA systems (i.e., PEPS, NSLDS, FMS, etc.). This being the case the Data Marts will eventually receive the RIDs and updated Loan IDs from such systems. Once the "feeder" systems begin processing with the new identifiers, changes will naturally "trickle down" to the Data Marts. In turn, the Data Marts will have to make the necessary adjustments to accommodate these changes.

11.3 Impacts to External FSA Partners

External FSA Partners (i.e., Trading Partners) will need to make certain adjustments to accommodate for the RID, although it has not yet been determined to what extent Trading



Partners will be affected. There are two different approaches that FSA could take while introducing the RID to the external community: 1) Implement the RID in a manner that is fairly transparent to the Trading Partners (i.e., allow them to use legacy identifiers that would be translated into the RID by FSA for internal processing purposes); or 2) Require that all Trading Partners use the RID during their interaction with FSA, resulting in the retirement of certain identifiers, such as the LID and the DL Code, within the FSA realm.

It is important to understand that the latter approach would not necessarily impact the Trading Partners' internal processing. They could use identifiers other than the RID when communicating amongst each other and during their own internal processing. In this scenario Trading Partners would only be required to use the RID when interfacing with FSA.

There are many elements that should be considered when determining the appropriate approach. It should be understood that the two options listed above are not comprehensive nor are they mutually exclusive. A blended approach may be taken; for example, one type Trading Partner (e.g., Schools) could use the RID for all interfaces, while another (e.g., Lenders) continues to use their current identifiers. Considerations vary according to Trading Partner type, and a selection of such considerations is included in the following sections. These considerations are not all-inclusive, and a detailed review of RID related impacts to external FSA partners should be conducted as part the Trading Partner Management initiative.

It should be noted that references to Schools, Lenders, and Guaranty Agencies in this section also include their corresponding third-party servicers.

11.3.1 Schools

Schools enter into the FSA lifecycle for the first time during the Title IV eligibility process in PEPS. On the E-App, Schools provide their Tax Identification Number (TIN) for identification purposes. Upon completion of the eligibility process, they are issued an OPEID as well as various other IDs for particular program participation (e.g., DL ID, FFEL ID, eCB Serial Number, etc.). During subsequent interactions with FSA, a School must provide certain identifiers depending on the system it is interfacing with. For example, when submitting the FISAP to eCB, a School is required to provide an eCB Serial Number. It should be noted that it is currently possible for a School to receive an eCB Serial Number before the Title IV eligibility process is completed in PEPS.

The implementation of the RID will reduce the number of unique identifiers that a School has. Currently the RID is generated within Common Origination and Disbursement (COD). The COD generated RID is an eight-digit randomly generated number that is used to identify Schools within COD only. Schools that are Full Participants (i.e., Schools that use the XML Common Record for COD) use the RID to identify themselves for origination and disbursement processing. Schools that are Phase-In Schools (i.e., Schools that use Legacy Records when interfacing with COD) are not aware of their RID and do not use it for processing. Although only Full Participant Schools are currently cognizant of their RID, COD currently generates a RID for all Schools involved in Direct Loan and Pell Grant Processing.



In the future, the RID will not be generated within COD; it will be generated in TPM and issued to all Title IV Schools during the Trading Partner Enrollment process. The RID will be used as the primary identifier for Schools. In some instances an additional School identifier may be needed for processing purposes. In these cases, the Legacy Identifier Crosswalk will be utilized to provide the appropriate IDs. For instance, transactions that involve GAPS require that a School be identified using the DUNS number. Since FSA cannot retire identifiers that are used outside of its enterprise, these IDs will continue to be maintained and utilized as needed. For more information regarding Trading Partner identifiers that will not be retired, please refer to Section 4.4.1.5 – TRADING PARTNER LEGACY IDENTIFIER TYPE.

In addition to using the RID as their primary identifier, Schools will also need to accommodate for RID-related Direct Loan Award ID and the FFEL Award ID changes. This may call for interface adaptations as well as message format changes. For more information regarding changes to the Direct Loan Award ID and the FFEL Award ID, please refer to Sections 11.2.3 – Common Services for Borrowers (CSB) and 11.3.2 – Lenders, respectively.

11.3.2 Lenders

Currently, GAs send FMS a new Lender's information on behalf of the Lender in order to receive a Lender ID (LID). After receiving the new LID, the Lender completes the Lender Application Process (LAP). Although this process is currently handled in FMS, it will eventually become part of TPM. For more information regarding the Trading Partner Enrollment process please see the Enrollment High-Level Design (Deliverable 123.1.28). In the future, when the Lender completes the Trading Partner Enrollment process, they can either receive only a LID or receive a LID as well as a RID. Whether or not the Lender is: 1) issued a new RID (i.e., a RID that is unrelated to its existing LID); 2) is provided with some type of mapping process to translate a LID (six digits) into the RID (eight digits) by adding leading or trailing zeros; or 3) is permitted to continue to use only their existing LID when interfacing with FSA must be determined. Below are some of the considerations for each of the three options listed above.

- Option 1: If Lenders are issued a new RID and are required to use this identifier when communicating with FSA, they will have to make significant changes to their interfaces. Since RID is an eight-digit number, file formats would have to be adjusted to accommodate this identifier since the LID is six digits. The Financial Partners community (i.e., FFEL Lenders and GAs) would need to decide if the RID should be utilized during their internal processing and in interfaces with other entities.
- Option 2: Lenders are provided with a conversion processes to translate their LID into a RID; this conversion could be done either by the Lender (before submitting to FSA) or by FSA (using Internal Integration Services). A LID to RID conversion could be accomplished by appending two zeros to the LID. For example, a LID of 123456 could be converted to a RID of 00123456, 12345600, or 01234560. There is the potential for these "zero-appended" LIDs to overlap with existing RIDs, since the RID is a randomly



generated number that already exists within the FSA. As part of a full impact assessment effort during the Detailed Design phase of the RID component an analysis should be done to determine the potential for this type of overlap to occur.

- Option 3: If Lenders are permitted to interface with FSA using only their LID, the onus of translation will fall on FSA. Upon receiving a LID, a LID to RID translation would be needed for internal processing purposes. This translation would have to occur since it has been agreed that the RID will be the main Trading Partner identifier used within the FSA enterprise.

In all three of the options listed above, the LID would be maintained within the Legacy Identifier Crosswalk, and will continue to be mapped to its corresponding RID. FSA may also continue to produce the LID. As mentioned earlier, these considerations are not meant to be all-inclusive and should be examined in greater detail by future efforts.

Lenders will need to make the necessary changes to handle the RID-enhanced FFEL Award IDs. For FFEL loans, the current CommonLine Unique Identifier (Loan Identifier) follows this format for all years:

- Digits 1-6: Participant ID (a unique identification code for the organization)
 - For Guarantors a three-digit number
 - For Lenders a six-digit number
 - For Schools the first six digits of the eight-digit ED- assigned School ID (OPEID)
 - This field is right-justified and padded with zeros
- Digits 7-10: Participant Branch ID
 - For Schools the last two digits (branch ID) of the eight-digit ED-assigned School ID (OPEID)
 - If ED has not assigned a branch ID, a unique identification code assigned by an entity other than ED to the branch office or campus of the organization
 - This field is right justified and padded with zeros. If no branch ID has been assigned, this field is all zeros
- Digit 11: System ID
 - A one-digit code indicating the computer system of the original electronic application
- Digits 12-17: Incremental Code
 - A unique six-character code assigned by the software application, where digits 12-14 represent a date code and digits 15-17 is an incremental counter
 - This field is determined by an algorithm prescribed for CommonLine participants

The RID could replace the Participant ID and occupy the first two spaces of the Participant Branch ID for a total of eight characters. A possible layout is as follows:

- Digits 1-8: RID



- Digits 9-10: Participant Branch ID
- Digit 11: System ID
- Digits 12-17: Incremental Code

Not only will Lenders be affected when the RID is implemented and the FFEL Loan Identifier is adjusted, it will affect all parties and systems utilizing the Common Line Unique Identifier.

11.3.3 Guaranty Agencies (GAs)

Currently, Financial Partners personnel manually enter GA information into PEPS, FMS, and NSLDS. GAs are issued a GA Code, a three-digit code, used as their unique identifier in FSA. Other systems modify this code (by appending digits) for their own use. For more information regarding such modifications, please refer to Section 9.1.2.7 – Guaranty Agency (GA) Code. Eventually, GAs will complete the Trading Partner Enrollment process in TPM. For more information regarding the Trading Partner Enrollment process please refer to the Enrollment High-Level Design (Deliverable 123.1.28).

In the future, when the GAs complete the Trading Partner Enrollment process, they can either: 1) be issued a new RID (a RID that is unrelated to its GA Code); 2) be provided with some type of mapping process to translate a GA Code (three digits) into the RID (eight digits); or 3) be permitted to use the GA Code only when interfacing with FSA must be determined. The considerations for these three options, as explained in the Lender section above, are similar for GAs. Of course, since the GA Code is three digits, as opposed to the six-digit LID, five zeros would need to be appended to the code in Option 2.

In the three options listed above, the GA Code would be maintained within the Legacy Identifier Crosswalk, and would be mapped to its corresponding RID. As mentioned earlier, these considerations are not meant to be all-inclusive and should be examined in greater detail by further efforts. GAs will need to make the necessary changes to handle the RID-enhanced FFEL Award IDs. For more information regarding FFEL Award ID changes, please refer to Section 11.3.2 – Lenders.

11.3.4 State Agencies

State Agencies are initially set up in FSA with basic demographic manually entered by FMS Operations. Currently, State Agencies receive a State Agency Code from FMS. Eventually, like all Trading Partners, they will participate in the Trading Partner Enrollment Process. State Agencies will be issued a RID within TPM, and will use this identifier to identify themselves within FSA. For more information on the Trading Partner Enrollment process please see the Enrollment High-Level Design (Deliverable 123.1.28). Since loan level details for the Leveraging Educational Assistance Partnership/Special Leveraging Educational Assistance Partnership (LEAP/SLEAP) program are not maintained in the FSA enterprise, no LEAP/SLEAP Award ID modifications need to be made to accommodate the RID.



11.3.5 Private Collection Agencies (PCAs)

Currently, Private Collection Agencies (PCAs) are established within Debt Management Collection System (DMCS). They are issued a Location Code which is used within DMCS to identify groups of accounts. The PCA Location code is a five-digit number that begins with "AG" and is followed by three numeric characters. New defaulted loans are transferred six times a year to PCAs for collections; these assignments are done according to the PCAs' Location Code. Any change to a loan that is in assignment (i.e., bankruptcy, death, disability, balance changes, litigation, additional fees, penalties, etc.) is made on a weekly basis from DMCS to the PCAs. In turn, the PCA will update DMCS with any changes to the borrower's account while it is in assignment (i.e., name, address, account information changes, etc.). A monthly inventory extract provides the PCAs with a list of accounts and a total dollar amount that is associated with those accounts assigned to them. Although there are other codes used to identify PCAs within DMCS (e.g., Collector Numbers which are used to further segment accounts assigned to collection agencies) the Location Code is the primary identifier used.

Like all Trading Partners, PCAs will receive a RID in the future. PCAs will be issued a new RID (i.e., a RID that is unrelated to its Location Code). Details surrounding the RID implementation for PCAs will have to be determined by future efforts. Additionally, the PCAs will need to make the necessary changes to handle the new format for Award/Loan IDs due to the RID. For more information regarding FFEL Award ID and DL Award ID changes, please refer to Sections 11.3.2 – Lenders and 11.2.3 – Common Services for Borrowers (CSB), respectively.

11.3.6 Federal Agencies

Various Federal Government Agencies interface with FSA to enable the distribution and collection of Title IV Aid. For example, during the Aid Application process, applicants' information is cross-referenced with the Social Security Administration for identity verification purposes. During Collections, the Department of Treasury (Internal Revenue Service) is contacted for income verification purposes. Aside from these two examples, FSA also interfaces with other Federal Agencies, such as: the Department of Justice (DOJ), the United States Postal Service (USPS), and the Department of Health and Human Services (HHS), etc. The RID solution allows for these Trading Partners to receive a RID for identification purposes. Federal Agencies will be issued a RID during the Trading Partner enrollment processes. For more information on the Trading Partner Enrollment process please see the Enrollment High-Level Design (Deliverable 123.1.28).

11.3.7 Auditors

Independent Auditors (IPAs) perform audits of Institutions' Federal Student Aid Programs. These audits are required for all institutions that participate in: Federal Family Educational Loan Program (FFELP), Federal Direct Loan Program, Federal Pell Grant, Federal Perkins Loan, Federal Work-Study (FWS), or Federal Supplemental Educational Opportunity Grant (FSEOG) Program. GAs and Lenders participating in the FEEL Program that originating more than a specified amount of Title IV funds during a program year are required to submit annual audits. These audits are forwarded to FSA for oversight purposes.



Auditors could be issued a RID during the Trading Partner enrollment processes. Assigning RIDs to IPA would ease to audit submission process. Auditors could identify themselves using their RID and identify the Trading Partner(s) being audited with the Trading Partners RID. For more information on the Trading Partner Enrollment process please see the Enrollment High-Level Design (Deliverable 123.1.28).

11.3.8 Owners

Owners are defined as an institution or individual that owns a Lender, Guarantor, or School. Owners, like the entities they own, are considered Trading Partners with FSA. Since the actions of an owner can affect an entity's ability to do business with FSA, it is worth assigning them a unique identifier for monitoring and tracking purposes. For example, a School loses eligibility to award Title IV funds when it undergoes a change in ownership that results in a change of control. If the School wants to regain its eligibility, it must reapply under the new ownership. Within the RID implementation, role designation is used to identify an organization that owns another Trading Partner. Since some School owner relationships are extremely complex and difficult to capture and maintain, this information may not be currently provided to FSA during the Trading Partner Enrollment process or the Recertification process. In the future, if desired, Owner information could be captured within the Trading Partner Enrollment function of TPM. Such owner/owned relationships would provide important information in regards to entity ineligibility as their relationship to other entities could be readily available.



12 Next Steps

As indicated in Section 1.2 Scope, the RID component is only one piece of the TPM Framework. There are additional functions and processes that combined with the RID functionality will comprise TPM. While several of these functions and processes have already been addressed by various initiatives, including the eCMO initiative and the Enrollment and Access Management component of the Data Strategy initiative, the remaining functions and business processes have yet to be addressed. These remaining functions and processes will be addressed by the Trading Partner Management System (TPMS) Requirements Gap Analysis (Task Order 147). This gap analysis will address the aspects of the TPM Framework, as illustrated in Figure 1 – FSA Trading Partner Management (TPM) Framework in Section 1.1 Background, that have yet to be addressed as well as determine if anything is missing. This will include re-examining the RID component and the information included within this document. The end result of this analysis effort will be a set of requirements for the TPM Solution.



Appendix A: Glossary of Terms

Refer to the Appendix_A_Glossary_of_Terms v1.0.doc file.



Appendix B: Overview of Current Identifiers in the Financial Aid Lifecycle

Refer to the Appendix_B_Overview_of_Current_Identifiers_in_the_Financial_Aid_Lifecycle v1.0.vsd file.



Appendix C: Core Team Meeting & Working Session Materials

The following table outlines the various Core Team Meetings and Working Sessions held during this phase of the RID initiative and provides a reference to the materials that were provided at each meeting and/or working session. The actual materials are included in order by date of the Core Team Meeting or Working Session.

Meeting/Working Session Name	Date	Materials Reference
Core Team Meeting – Schools and Financial Partners	8/12/03	Appendix_C_RID_Core_Team_Meeting_8-12-2003.ppt
Core Team Data Model Working Session – Schools	8/19/03	Appendix_C_RID_Data_Model_Working_Session_8-19-2003.ppt
Core Team Data Model Working Session – Financial Partners	8/20/03	Appendix_C_RID_Data_Model_Working_Session_8-20-2003.ppt
Core Team Data Model Working Session – Financial Partners	8/28/03	Appendix_C_RID_Data_Model_Working_Session_8-28-2003.ppt
Core Team Data Model Working Session – Collections	9/16/03	Appendix_C_RID_Data_Model_Working_Session_9-16-2003.ppt
Core Team Meeting – School and Financial Partners	9/16/03	Appendix_C_RID_Core_Team_Meeting_9-16-2003.ppt
Core Team Data Model Working Session – Servicing	9/22/03	Appendix_C_RID_Data_Model_Working_Session_9-22-2003.ppt
Core Team Process Flow Working Session – Schools and Financial Partners	10/23/03	Appendix_C_RID_Process_Flow_Working_Session_10-23-2003.ppt



Appendix D: High-Level Functional Requirements Matrix

Refer to the Appendix_D_High_Level_Functional_Requirements_Matrix v1.0.xls file.